

PEARLS AND POLITICS -
THE IMPACT OF THE DEVELOPMENT OF THE
CULTURED-PEARL INDUSTRY ON MANIHIKI

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for the degree of
Master of Arts in Sociology

by

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ABSTRACT

This study attempts to discern the effects of a new industry on a small, isolated coral atoll in the central Pacific: pearl farming in the lagoon of Manihiki, in the Northern Group of the Cook Islands.

Through a combination of archival research, interviews and participant observation, I discuss the historical development of the cultured-pearl industry as a precursor to analysing the contemporary situation. The research design utilised in the study reflects the position of the researcher as a member of the researched community.

A rudimentary theoretical framework is proposed, based on the need for a multi-disciplinary approach to studying the Pacific, by combining Development Theory with other relevant approaches, e.g., Mirab, Smallness.

Political control of the industry lies with the Manihiki Island Council, whose view of development has conflicted with that of central government and has disturbed the relationship between Manihiki and Rarotonga. As the industry continues to develop, Manihiki will become more dependent on Rarotonga, and control of the industry will probably return to central government.

Socially, the industry has caused an occupational change from gathering wild shell to farming. Families remain the main economic unit of production, but alterations to their income structure and labour allocation result from their level of involvement with farming.

A reversal of migration and remittance patterns appears to be occurring, as migrants are attracted back to Manihiki by the development of farming and more money flows out of Manihiki than in. These results suggest that some ideas on Pacific Island dependence need to be reconsidered.

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Although it is my name that appears on the cover, there are many others whose assistance and endeavour also makes them responsible for the completion of this work.

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All responsibility for errors and inadequacies remains my own.

DEDICATION

This thesis is dedicated to
my parents,
Brian and Repeka Newnham,
and to my grandfather,
Temu Piniata:
so much a part of my life
with so little time left.

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ABBREVIATIONS

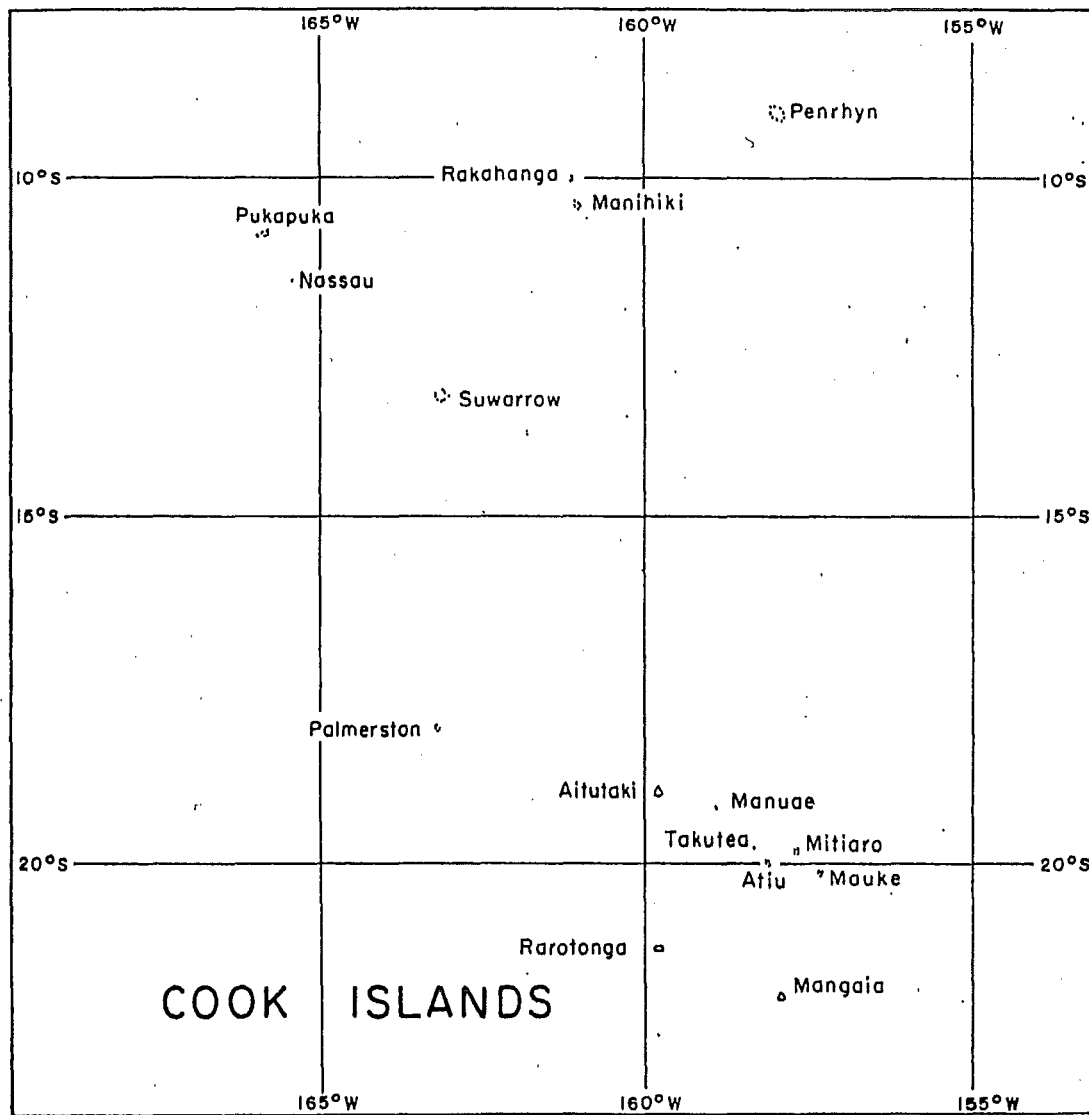
CAO	Chief Administration Officer
CICC	Cook Islands Christian Church
CIDB	Cook Islands Development Bank
CIQSB	Cook Islands Quarterly Statistical Bulletin
GDP	Gross Domestic Product
NZCE	New Zealand Certificate of Engineering
SDA	Seventh Day Adventist
SPC	South Pacific Commission
SPEC	South Pacific Bureau for Economic Co-operation

GLOSSARY

<i>ariki</i>	traditional chief or king
<i>enua ipukarea</i>	ancestral home land
<i>fare pora</i>	house constructed of indigenous timber with a coconut thatch roof
<i>hakari</i>	stage of coconut when flesh is thickest.
<i>hopu</i>	dive
<i>hopu pahua</i>	dive for the clam
<i>kai-kai</i>	feast
<i>kaiou</i>	debt or account held at store
<i>kirikiri</i>	small pebbles found on beach
<i>korori parau</i>	meat of the oyster
<i>mapu</i>	youth
<i>mapu tane</i>	young man
<i>motu</i>	islet in lagoon
<i>ngangie</i>	ironwood (<i>Pemphis aciduala</i> Forst.). Shrub used as spat collector material.
<i>pahua</i>	Rugose Giant Clam (<i>Tridacna maxima</i>)
<i>papaa</i>	person with white skin, or, in social context, observer of European habits (derog.)
<i>parau</i>	oyster (<i>Pinctada margaritifera</i>), oyster shell
<i>pora</i>	dried leaves of coconut woven together
<i>rahui</i>	reserve area
<i>tamaiti fangai</i>	feeding child (lit.) Child informally adopted out

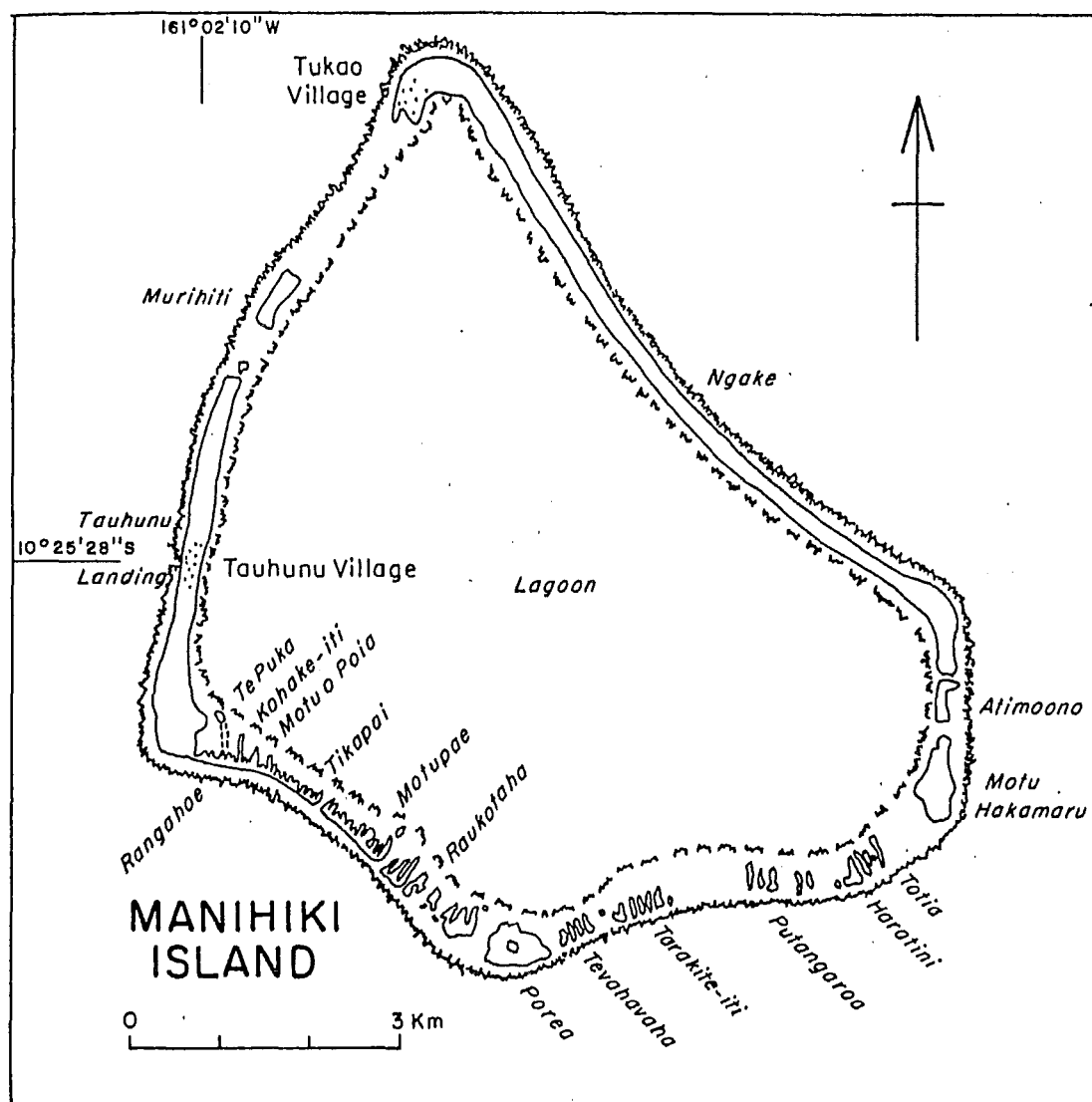
<i>tete</i>	clean by chipping
<i>tuai</i>	serrated instrument used to grate flesh of coconut
<i>umu</i>	earth oven

FIGURE 1
The Cook Islands



Source: Survey Department, Rarotonga

FIGURE 2

Manihiki

Source: Survey Department, Rarotonga

CHAPTER ONE : INTRODUCTION

Introduction

These two islands have, however, taken their own destinies in hand and will succeed if they can find but one honest man among them.

(W.E. Gudgeon, regarding Penrhyn and Manihiki, Cook Islands Annual Report, 1906, Appendix to the JHR of New Zealand, p-83).

The small coral atoll of Manihiki, located in the Northern Group of the Cook Islands, has recently been the focus of much national political attention. This attention is related to the troubled introduction to Manihiki's lagoon of cultured-pearl farming. The development of this particular industry is seen by the Cook Islands government as vital for the future of the small isolated atolls of the Northern Group as well as for the whole of the Cook Islands. Yet despite this concern, the first three years of development have been marked by ill-feeling, lack of co-ordination and hesitant progress.

The problems faced by central government will be a major focus of this thesis. Central and local government have both sought to develop the industry according to their respective viewpoints, and the battle for control between national and regional bodies will be discussed with relevance to particular sociological theories on development.

The second major focus will be on social impact. When new industries are developed in outlying areas, it is always "for the benefit" of that particular area. I propose to assess the development of the cultured pearl industry on Manihiki by analysing how particular families have adapted to the demands of pearl farming. What changes, if any, have they had to make? What other aspects of life on Manihiki are being changed, or could be, as the industry develops?

I propose that we can assess development in particular areas better by utilising case studies than by reference to broad economic indicators such as national income or G.D.P. While these measures are useful for gauging national development and for gaining a picture of economic influences at a regional level, assessment at a local level is better served through qualitative measures.

The Cook Islands

The fifteen islands of the Cook Islands are located between 8⁰ and 23⁰ south latitude and 156⁰ and 167⁰ west longitude. They are bounded by French Polynesia to the east, the Line Islands to the north, and Samoa, Niue and Tonga to the west. To the south lies open sea with New Zealand some 3,000 km away to the south-west.

Geologically, the Cook Islands are a mixture of low-lying coral atolls, raised makatea-type islands and high mountainous islands. All the islands are summit portions of extinct volcanoes, the oldest dating from the Late Pliocene era (Wood and Hay, 1970, p. 9). Scattered over a wide area, the total land mass of the Cook Islands is only 240 sq.km., yet its territorial sea and exclusive economic zone covers nearly two million sq.km. (Peyroux, 1983, p.1). The Cook Islands, like Niue and the Tokelau Islands, are a self-governing country in free association with New Zealand. Under this arrangement, responsibility for defence lies with New Zealand, but in all other matters the Cook Islands acts independently. Cook Islanders are New Zealand citizens by birthright, and the resultant freedom to travel and work in New Zealand has led many Cook Islanders to emigrate.

There are now more than 33,000 people who claim Cook Islands Maori descent resident in New Zealand (Bedford and Didham, 1989,

p.12). Of these, over 15,000 were born in the Cook Islands. At the last census in 1986, the resident Cook Islands population was 17,463 (C.I.Q.S.B. June, 1988, p.1).

The Cook Islands has a parliamentary system consisting of two houses. A House of Representatives decides all legislative matters for the country. A lower House of Ariki (Chiefs) only has powers of recommendation to the upper house. National elections for the House of Representatives are held every five years. Members of the House of Ariki are decided by whoever holds the title for a particular village or island. Traditionally in Manihiki, the title was inherited by the eldest son of the previous *ariki*, but the practice is now for the kin to elect a representative with women being able to hold the title. This is an intrusion of Rarotongan practices where this has long been the case. Titles are more for ceremonial purposes now, as political power is vested in nationally and locally elected bodies. Socially however, a certain amount of respect is still accorded to holders of an *ariki* title.

The 15 islands of the Cook Islands are normally divided up into two groups: the Southern Group and the Northern Group. While the categories are geographical in origin, they are often used to characterise social and political differences as well.

Southern Group

The nine islands in the Southern Group (refer figure one) are larger and more fertile than the Northern Group. They provide over 90% of the value of goods exported¹ and retain the majority of the population. Rarotonga, the capital of the Cook Islands, is the largest island and boasts

¹ The 1988 C.I.Q.S.B. shows that the total value of goods exported in 1987 was \$12,039,300; only \$1,213,800 came from the Northern Group, in the form of copra and pearl-shell.

the only international airport² as well as the major port facility. Over half the resident population of the Cook Islands lives on Rarotonga, and it is the centre of commerce and trade for the whole group.³

Northern Group

These six islands, (Pukapuka, Nassau, Manihiki, Rakahanga, Penrhyn and Suvarrow), are all coral atolls with the exception of Nassau which has no lagoon.⁴ Coral atolls are low-lying islands with no volcanic or continental rock in their surface geology (Crocombe, 1987a, p.ix). They have irregular shaped reefs enclosing a lagoon with the narrow islets strung around the fringing reef. Penrhyn is the largest with a lagoon circumference of 64 km.

The Northern Group islands are characterised by their poor soil, small land mass and particularly by their geographical isolation from Rarotonga. Penrhyn, Rakahanga and Manihiki have airstrips, but flights are only to Penrhyn as the other two airstrips are not operable yet. A ship scheduled every month which is often delayed, remains the main transport in and out of the group. Apart from this, the only other communication with Rarotonga is by Radio Transmitter.

As a result of this isolation, the Northern Group has tended to retain more of its traditional way of life. Subsistence fishing and agriculture still predominate, although they are often combined with income-earning tasks, such as shell-diving and copra. Shipping delays,

² Penrhyn has an international-sized airstrip built by the Americans during World War II. It is also a port-of-entry but the airstrip is not used commercially by international flights, only by a fortnightly service to Rarotonga.

³ In 1986, out of a population of 17,463, those resident on Rarotonga numbered 9,678 (C.I.Q.S.B. June, 1988).

⁴ The census figures include Palmerston Island in the Northern Group but the Survey Department lists Palmerston in the Southern Group. In this thesis, Palmerston will be referred to as in the Southern Group, leaving six islands in the Northern Group.

often up to six weeks apart, results in shops running out of goods, which again has helped to preserve reliance on subsistence skills.

The geographical distance from Rarotonga has to some extent been reflected by bureaucratic isolation. The only bank is the Post Office Bank on each island. There is no secondary schooling available in the north, and those who wish to, have to attend Tereora College on Rarotonga. Government departments have one or two representatives on each island. These occupations, however, do not all demand full-time participation, and some are combined with other work (refer to chapter four).

The isolation is not always disadvantageous. For example, shell divers on Manihiki and Penrhyn are not taxed despite earning in some cases up to \$600 a week.⁵

Manihiki

Located 10° 25' 28" south and 161° 02' 10" west, Manihiki is 1204 km from Rarotonga. Its 544 hectares of land rise to approximately 5 metres above sea level at the highest point. The lagoon, known as one of the most beautiful in the Pacific, has a diameter of 8 km at its widest point and an approximate area of 48 sq. km. There are no deep passages into the lagoon so all cargo is ferried ashore on lighters and unloaded by hand.

There are two villages on Manihiki, Tauhunu and Tukao, situated on separate islets. Tauhunu is the administrative centre and has the larger share of the resident population of 466 (Census, 1986).⁶ Both villages are

⁵ New Zealand money is the main currency of the Cook Islands. They do produce their own money but it is only used within the Cook Islands along with New Zealand money.

⁶ The 1986 Census records the Tauhunu population as 308 and Tukao as 200. The figure for Tauhunu was slightly higher than it should have been due to the presence of a visiting family group of approximately 40 people from New Zealand who were not normally resident on Manihiki.

served by diesel generators which supply electricity 10 hours per day. Both villages also have access to the ocean through passages blasted in the reef.

With an average temperature of 28° C, Manihiki actually receives more rainfall than more temperate Rarotonga (Peyroux, 1983, p-3). However, because of the nature of the sandy soil, little is retained, so cultivation of crops is extremely difficult. The coconut tree is the dominant food crop on the atoll, providing in its various stages a source for drinks and meals. Breadfruit, bananas and pawpaws also grow but do not produce as prolifically as the coconut. Vegetables do not grow well and the diet is based on fish, rice, imported canned meat and some fresh produce sent from Rarotonga by relatives.

Copra and pearl-shell have been the mainstay of the Manihiki economy since contact with the European, though their predominance as the main source of income for families has been challenged since self-government by wage-labour. The influence of copra and pearl-shell has also varied according to the condition of the lagoon: if the lagoon was closed to diving, then copra became the main income.

Since 1981 the lagoon has been continuously open. This has coincided with a decrease in the world-wide demand for copra and a rapidly increasing shell price. In July 1989 the prices offered for copra and shell on Manihiki were respectively \$350 a tonne and \$13,200 a tonne.

Shell Diving

Diving for the mother-of-pearl oyster (*Pinctada margaritifera*), or *parau*, has been a major occupation for Manihiki men since the 1870s. Until the late 1960s sailing boats were the normal method of transportation across the lagoon to the diving site for the day. Now divers, working in pairs, have aluminium dinghys and outboard motors.

To reach the oysters, men will dive between 30-40 metres in one breath.⁷ Divers use a lead weight tied to a rope, to reach the lagoon floor. At the bottom he will leave the weight, gather some shells and return to the rope. He tugs the rope to indicate he is ready and the man in the boat pulls him up. The whole procedure may take 2 to 2-1/2 minutes, depending on the individual's capacity.

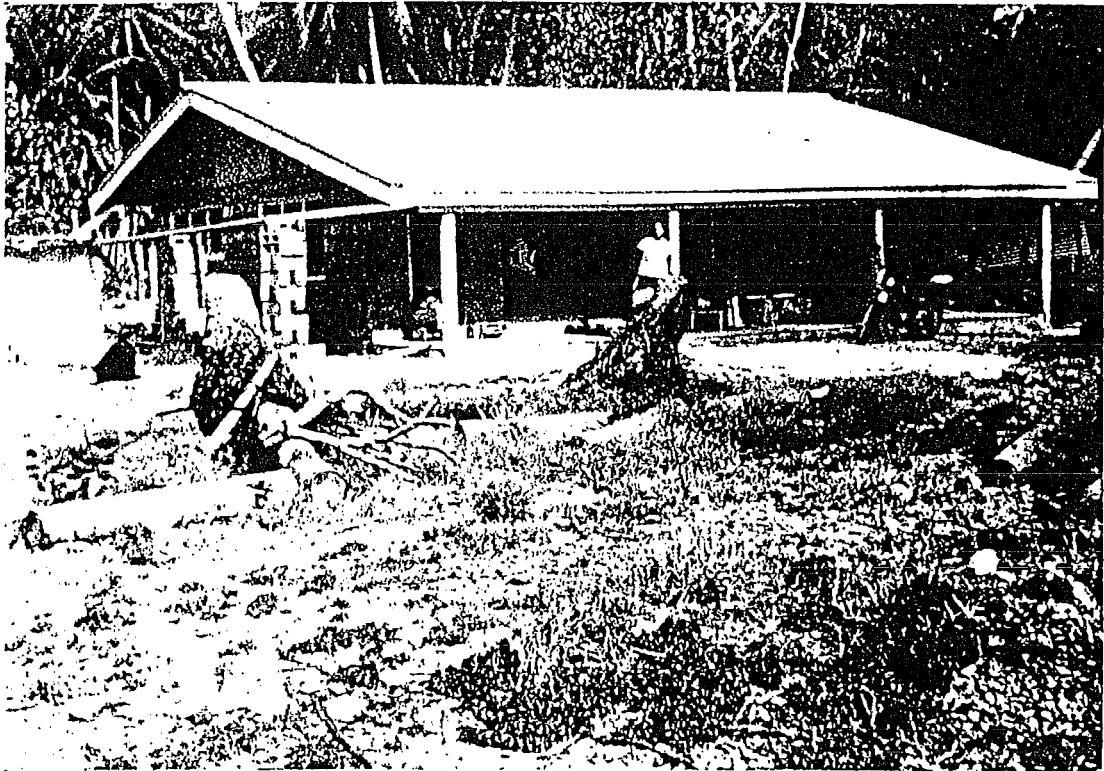
At the end of the day the shells are graded with undersized ones being placed on the diver's 'bank'. The bank is a coral head or shallow site close to the village. The undersized shells are left to grow here until big enough to kill. At present, a shell must be at least five inches in width, after cleaning, to be sold to a shell-buyer. This is a conservation measure designed to ensure a sufficient number of mature shells are retained for breeding purposes.

The shells that are considered large enough are taken ashore, where the women in the diver's family will remove the oyster and stack the shell for cleaning. The oyster (*korori parau*) is either eaten fresh or dried for sending to relatives in Rarotonga. The shells will be chipped, cleaned and dried prior to sale to a shell-buyer on Manihiki. In the past, these buyers were agents for Rarotonga exporters, but recently some Manihikians have begun exporting direct to the market in Japan.

Direct access to the market has helped push the price for shells up 60% in two years. In 1987 the price per pound was \$3.80(\$8.36 per kg.), but by July 1989 it had risen to \$6.30 per pound (\$13.86 per kg.).

Earnings from diving are intermittent, reflecting the nature of the occupation and the commitments of the people. Lagoon conditions,

⁷ For conservation reasons, the use of SCUBA equipment is not permitted except for work on farms. If SCUBA gear was used to gather wild shells, the rapid depletion of numbers could wipe out the resource.



Top: House on Manihiki illustrating water catchment and storage facilities

Bottom: Women cleaning mother-of pearl shells (*tete parau*) for sale.



community work or personal commitments (fishing, farming) can restrict diving time. No diving is allowed on Sundays, religious holidays, funeral days or boat days.⁸ If a diver is able to dive four days in one week he may earn over \$600 for himself and his partner. Yet in the following week, due to other demands on time, he may be unable to do any diving.

Pearl Farming

Pearl farming occurs in many places around the world, employing many differing techniques and utilising various species of oysters. In the Pacific the Gold-lipped oyster (*Pinctada maxima*), is farmed in Western Australia, the Silver-lipped (*Pinctada martensii*), in Japan, and the Black-lipped (*Pinctada margaritifera*), in French Polynesia and the Northern Group of the Cook Islands. When seeded, the first two species produce white or cream pearls, and the latter produce black pearls.

1987 saw the beginning of pearl farming as a viable industry for Manihikians. Eight locally owned and worked farms had oysters seeded by a Japanese technician. By November 1988 this number had risen to 28. The period between seeding and harvest is 18 months, so the first returns were not until April 1989.

October 1987 also saw the arrival of Yves Tchen-Pan, a Chinese-Tahitian, to begin pearl farming. He had negotiated a lease with the Manihiki Island Council (the local body responsible for the lagoon) for a three-hectare block of the lagoon. Over the last two years, drawing from both villages, Yves has employed up to 40 people at one time. Due to the seasonal nature of farming (harvest and seeding times are the busiest), the number of workers normally varies between 20 and 30.

⁸ Boat days are the days when the ship from Rarotonga calls at Manihiki to off-load. All the able-bodied men are supposed to work on the wharf or on the lighters until the unloading is finished.

Yves' workers are required to put in a full eight-hour day Monday to Friday, plus Saturday morning. Anybody who works on a farm however, be it locally owned or for Yves, is still subject to the same rules as divers prohibiting work on religious days, days of funerals and boat days.

Paid labour is not used by local farmers as most farming requirements can be carried out by individual family groups. A system of reciprocal labour exchange is used for larger jobs. Friends will assist in return for a meal during the day and an obligation is placed on the family receiving the assistance to reciprocate at some unspecified time in the future.

Pearl farming is based around the cultivation of the mother-of-pearl shell during its various stages of growth.

Life Cycle: There are two main spawning periods for the oyster: pre-summer and post-summer. In Manihiki trickle spawning does occur throughout the year, but the heaviest concentration is in the two periods from August to September and February to March. Following fertilization, the larvae drift for two to three weeks, feeding and gaining weight, before settling on to any suitable substrate (Coeroli *et al.*, 1982).

Initial growth is rapid, but the average maximum size of around 16cm is attained only after many years (Sims, 1988a, p-3). Individual oysters are either male or female, but sex changes can occur throughout the life cycle. Initially, the majority are males, and it is not until about the fifth year that an even ratio is achieved (*ibid.*).

Spat Collection: 'Spat' is the label given by farmers to the young oyster after it becomes visible. Farmers set "spat collectors" to catch the planktonic larvae when they settle. The collectors are long 12mm polypropylene ropes supported by floats and anchored to the bottom. To these ropes (long-lines) will be attached materials which the farmer

considers will prove a suitable surface for the spat to settle on. This is usually more rope, but can be shade-cloth, rubber, polythene or *ngangie* (a local shrub).

After settlement, it will be two to three months before the spat become visible and a further four to six months before they are carefully removed. The spat, now measuring five to eight centimetres, are then placed on large trays which sit on platforms raised off the bottom of the lagoon.

Seeding Preparation: To prepare for a seeding shells measuring eight centimetres or more are removed from the platform, cleaned, drilled and suspended from ropes. Reducing the density of the shells ensures that they are strong and healthy for the seeding operation.

The shells to be drilled are taken ashore and placed in the shallows. Here they are cleaned by scraping off any unwanted growth, such as other shells or weeds. The shells are drilled through the hinge at the bottom, using generator-powered electric drills with a small 5/64 drill bit. After drilling, the shell is immediately strung up and returned to the water. Shells are attached in pairs to a 4mm rope by threading a piece of stainless steel wire through the rope and the hole in the shell, and twisting it back on to the rope. At the end of the day, all the strings are taken and hung on to a long-line similar to the spat collector, but without materials attached.

The preparation is carried out at least a month before the seeding is due to be conducted. At the time of seeding, the shells are brought up off the long-line, removed from their strings and cleaned. They are then forced open, using a special instrument, and kept open, by inserting a peg between the two halves of the shell.

The Seeding Operation: The seeding season is timed to begin after the major spawning periods are over. The operation is performed by a

technician (usually Japanese), who cuts the gonad of the oyster and inserts a round bead and a piece of mantle. The round bead - the size of which is determined by the condition of the gonad - is actually clam shell imported to Japan from farms on the Mississippi delta. The Japanese importers grind up the shells and reshape it, before selling them to the technicians.

The mantle - which is the part of the oyster that lays down the mother-of-pearl coating - is gained from killing an oyster with a healthy growth rate. The technician cuts this mantle up into 30-60 pieces, depending on the size of the killed oyster. One piece is inserted into each oyster seeded. If the oyster accepts the bead, the mantle grows around it and lays down the coating. After the operation the peg is removed, allowing the seeded oyster to close up. It is then carefully re-strung and returned to the long-line.

Some oysters may, for various reasons, reject the beads. Others may become too weakened by the operation and handling and die. A retention rate of the beads of 40 to 50 percent at the end of 18 months, is considered good.

Harvest: Over the 18 months following the seeding, the oysters will be periodically removed from the line, cleaned and re-strung. A sample will be taken after a year to determine the level of the coating on the bead. When the time is deemed correct, again after a spawning season, the technician will check the shells, remove any pearls and re-seed those shells considered strong enough to survive another operation.

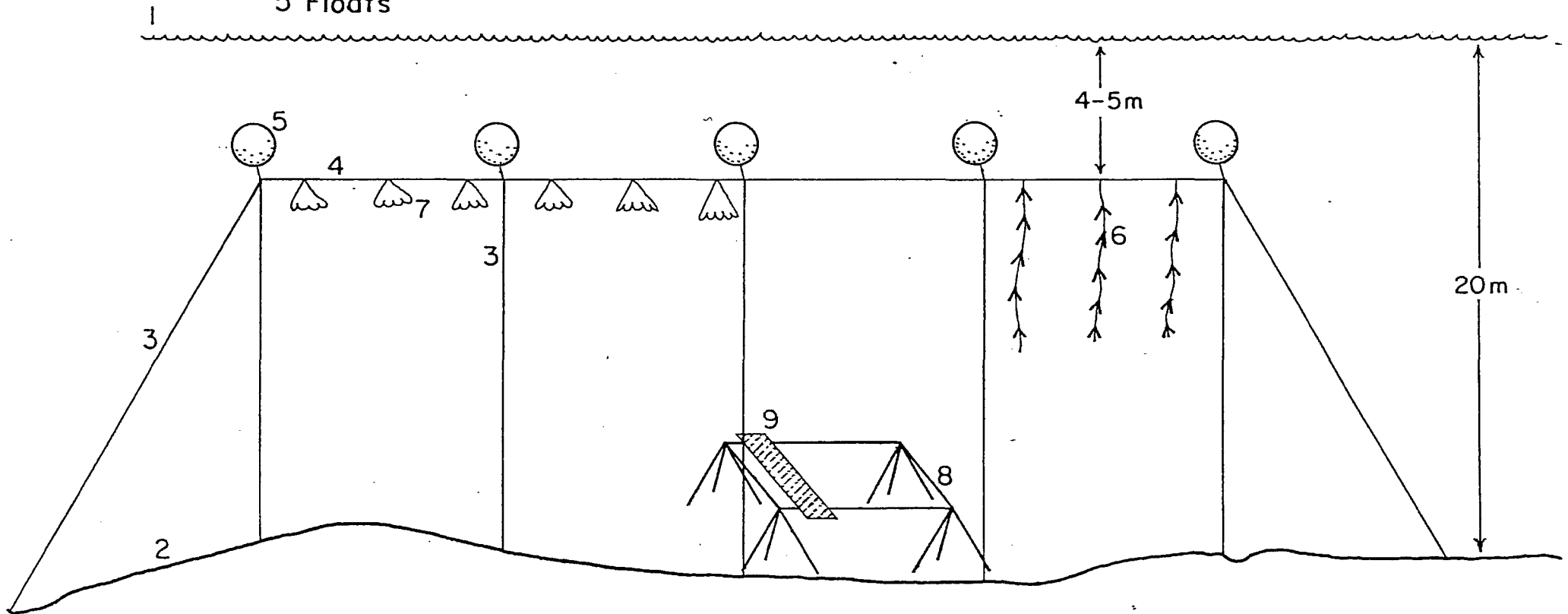
If an oyster is not to be re-seeded it may be killed. The shell is then chipped and cleaned as for wild shell. Farmed shell is always top grade and fetches the equivalent 'A' Grade price of the best unfarmed shell.

While the process described above is the ideal version of a farm, very few farmers have reached this stage. Most began seeding without

FIGURE 3

13

- | | |
|----------------|------------------------------|
| 1 Lagoon level | 6 Shells hanging on strings |
| 2 Lagoon floor | 7 Spat-collector materials |
| 3 Anchor rope | 8 Platform |
| 4 Long-line | 9 Tray for placing shells on |
| 5 Floats | |



Pearl Farm Plan

platforms, spat collectors or long-lines. They were able to do so by utilising the large stock of banked wild shell that they had accumulated as divers.

For the November 1988 seeding, the majority of the 28 farmers laid their long-lines during the week prior to the seeding. On their allocated day, they took their banked shell directly to Yves. At a charge to the farmers, Yves' workers drilled, seeded and strung the shell. The farmer then attached his shell to his long-line.

Most farmers had begun spat-collecting only during 1988 (some after the seeding), and consequently had no spat-collected shell available for seeding. Theoretically, spat-collected shell are healthier and far more suitable for seeding than wild shell.

As well as the cultivation, preparation and maintenance of the shells, the rest of the plant needs to be maintained. This involves scraping the lines of other growth (clams, mussels, weeds), and replacing worn anchor ropes. New lines may be laid or old ones replaced. Floats must also periodically be removed and cleaned. If drilling is imminent, strings and wire must be cut and prepared. Spat collectors must also be cleaned periodically prior to spawning seasons.

Copra

Copra production has dropped away to virtually nil in 1989. The hard work required to produce copra in sufficient amounts to make it profitable does not seem worthwhile when the relatively easier option of shell diving is available. What little has been made was done by older people on pensions and as fundraising by the two primary schools on Manihiki.

Copra is made from the fleshy portion of the old coconut

(*hakari*). Families wait until old nuts drop from the trees. These are gathered together in heaps until a sufficient quantity, normally at least 500, is ready for husking.

Husking the nut is a skill that one develops over years of practice. The nut is jammed onto a sharpened steel rod and twisted. Care must be taken not to pierce the interior of the nut or the flesh will be damaged. However it is the potential damage to one's hands from the end of the rod that is of most concern.

Once all the nuts are husked, they are cracked in half and left to dry in the sun. The flesh is then removed and broken into smaller pieces before bagging. Drying can be hastened by using a copra kiln, but the whole process may take three to four days of arduous work.

Another and easier source of revenue from the coconut is selling nuts to a coconut-cream factory on Rarotonga. All that is required is for the nut to be husked, so the task is far simpler than making copra. The factory buys the nuts through an agent on Manihiki for 10c each.

Other sources of income on Manihiki are government wages, remittance payments and, for a few families, profits from running a shop.

Government Workers

48 people on Manihiki were employed by Government in June 1989 (Field Survey 1989); 16 were wage workers and 32 were employed on salary (refer table one). Of these 48 jobs, only 27 could be classified as full-time. They are occupations such as teaching and administrative jobs at the Post Office. The remaining 21 jobs, while being paid for full-time work, can be carried out efficiently on a part-time basis. The incumbents are therefore able to combine these Government jobs with other pursuits, e.g. diving.

Remittance Payments

Remittance payments from family members in New Zealand, Australia or Rarotonga form another part of income for families on Manihiki. The money is sent either as a Money Order telegram or as cash in letters. The extent to which families rely on remittances varies, and in some cases the money flow is reversed, with money being sent from Manihiki to support family overseas. This point will be elaborated on in the discussion.

TABLE 1

Government Employees on Manihiki, June, 1989

Occupation	Wage	Salary	Total
Radio Operator	1	1	2
Watchman	2		2
Groundsman	4		4
Teacher	2	9	11
Electric Power Serviceman	4	4	8
Nurse		2	2
Doctor		1	1
Health Inspector		1	1
Policeman		2	2
Post Office Clerk		5	5
Treasury Clerk		2	2
Fuel Officer	1	1	2
Agricultural Officer		1	1
Marine Resources Officer	1	1	2
Marine Resources Storeman	1		1
Community Development Officer		1	1
Chief Administration Officer		1	1
Total	16	32	48

Source: Field Survey 1989

Trading Stores

There are nine shops on Manihiki; five in Tauhunu and four in Tukao. They stock mainly non-perishable items, although one has recently begun ordering frozen goods from Rarotonga. As most of the goods are imported to Rarotonga before being freighted to Manihiki, the final cost to the consumer on Manihiki is severe. On some items, the difference in retail price between New Zealand and Manihiki may be as much as 50%. Despite this, very few families prefer to order directly from Rarotonga.

The main reason why families are prepared to pay the higher prices is the granting of *kaiou* (credit). Individuals can delay payments for unspecified periods of time if they pay a sum each week. Most accounts are never cleared. One shop, which probably has the highest turnover on Manihiki - \$20,000 for May 1989 - had a total of \$50,000 in *kaiou* outstanding (Field Survey).

Households

Households on Manihiki are characterized by the diversity of their sources of income.⁹ Most can combine two or three sources by utilising the labour of both sexes, over several generations e.g., diving and government wage, pension and coconuts.

Food and fuel are the major expenses for households. Every household has a boat and a small outboard motor. The normal mode of transport on land is a small 50-90 cc. scooter as there are no cars.

The inflated cost of most products on Manihiki is compensated for by the reduced overheads. There are no mortgages or rates, as the land and houses are owned outright. Water is caught through run-off from the aluminium roof into tanks. When private tanks run out or if families are

⁹ A household is defined herein as the place of usual residence. This may include members of kin groups from outside of the landowners, but who live with and contribute to that family group. In June, 1989 there were 50 households in the village of Tauhunu.

residing in a house with a thatch roof, the public water catchment is available. If a family lives in the village, electricity is available at subsidized rates.¹⁰

Kinship Structure

The importance of the extended family to the household unit still remains on Manihiki. In a field census in 1985, Underhill found 47% of households in Tauhunu were composed of three or four generations (Underhill, 1989, p.97). All generations contribute to production either directly through labour or indirectly through childcare and other domestic chores.

While all Manihikians claim descent from two original settlers, those genealogical lines have been lost from memory.¹¹ Some orators, however, can still recite family lines going back over 15 generations. This skill is slowly being lost, and most families now depend on written records of family trees. Inheritance is through a cognatic descent pattern. Any descendant of an ancestor or ancestress can claim rights to land through a matrilineal or patrilineal connection. In practice this means five or six generations from the original holder.

Entitlement to a particular piece of land may be shared by up to several hundred people. Numbers have been reduced by several methods. The major one is absenteeism. Those members of the family not resident on Manihiki cannot retain a share in the products of the land. More importantly, they do not have the final say on allocation. If a family member wishes to build on a particular piece, s/he will advise others entitled to that land. If there is a dispute from somebody residing off Manihiki, but family members living on Manihiki give their approval, the

¹⁰ The subsidy to Manihiki for 1986/87 was \$48,500 (Development Plan Two 1988).

¹¹ See Buck, (1932 pp 20-27) for a written account of this descent pattern.

absentee will be over-ruled and permission will be given by the Island Council to build.

Another method of reducing numbers was to share land out amongst the first generation of children. The number of descendents entitled to that section is then reduced as the original holder of a section may be only three or four generations back.

In other cases, some members of a lineage will voluntarily forego their access right. These are generally descendants of the younger children of the original family. The first-born child of the original holder would have exercised caretaker rights, as the eldest, to the land for the whole family. As the entitlement passes down through the family chain, that first-born's lineage's claim becomes stronger. While access is not denied to other lineages, they may not press their claim or utilise their entitlement, as long as a member of the first-born's lineage resides on Manihiki.

One method of maintenance of kinship ties occurs through a process of informal adoption known as feeding children (*tamaiti fangai*). Babies of one line of a descent group will be taken by members of another line of that descent group, and raised as their own. As the child grows up s/he will know who its biological parents are, but primary membership is in the feeding lineage. Inheritance rights change to those of the feeding parents, but in many cases this is not strictly applied and the choice is left to the child.

Marriages are usually exogamous, but in recent times this practice has also been less strictly applied. While it is a matter for discussion and raises a few eyebrows, marriages between third cousins now occur. This breakdown in a previously rigidly adhered to tradition reflects the increased acceptance of European views on legality of practices, as being more important than traditional cultural acceptance.

Religion

In 1989 there were three church groups present on Manihiki: the Cook Islands Christian Church (C.I.C.C.), the Roman Catholic Church and the Seventh Day Adventists (S.D.A.). The Latter Day Saints (Mormon), were present in the early 1980s but found recruitment too difficult and left after two years. There is also one family of Jehovah's Witness (Refer table two).

TABLE 2

Stated Religion of Manihiki Resident Population 1986

Religion	Number
Cook Island Christian Church	280
Roman Catholic	140
Church of Jesus Christ of the Latter Day Saints	1
Seventh Day Adventist	37
Other*	8

* Includes not stated and objected

Source: Census 1986

While attendance may not be regular for most people, church practices infuse everyday life. Prayers are said before every meal, prior to going diving or fishing, and at the beginning and end of dances, work

projects and meetings. The Sabbath is a day of rest, as are religious days such as Christmas, Easter, and Gospel Day.¹²

Contributions are made regularly to the church as well as on special occasions such as beginning a new job, the birth of a child or an individual's birthday. These occasions mark periods of change in an individual's life and the offering is believed to guarantee the continued well-being of the donor. The contributions are normally split up into an amount for the church and a sum for the Church minister who is supported by the congregation.

Political Structure

Manihiki's local government body is the Island Council. Five people - three from Tauhunu and two from Tukao - are elected every three years to join the Member of Parliament, the *Ariki* and the Chief Administration Officer (C.A.O.) on the Council. The five elected members have voting rights, with the other three only entitled to rights of address.

The Island Council are responsible for the administration of the *rahui* (reserve lands) and the lagoons. They are viewed as the caretakers of the traditional rights of ownership to land and lagoon and have the final say in boundary and entitlement disputes. The Island Council also have responsibility for the public water catchment areas and the maintenance of the three community tractors on Manihiki.¹³ Apart from the machinery currently being used to build the airstrip and one privately owned truck, these are the only heavy-duty vehicles on the island.

¹² The Sabbath for S.D.A. is from sunset Friday to sunset Saturday, while for the Catholic and C.I.C.C. it is Sunday. Gospel Day is the fourth Monday in October and celebrates the arrival of the Gospel into the Cook Islands.

¹³ The Island Council pay for a full-time driver in each village. A fee for each trip is charged to anybody that wishes to hire the tractor for the day, to transport coconuts or other materials from their land to their home.

Any event that requires island representation or participation is organized by the Island Council. These may be a dance troupe to Rarotonga or a *kai-kai* (feast) for visitors or leavers on Manihiki.

At the national level, Manihiki is represented by one Member of Parliament and one *Ariki*, both of whom reside in Rarotonga.

Aims and Objectives

At the centre of our analysis will be the question of lagoon rights. The dispute over who has political control of the developing industry on Manihiki has been between central government through its representative, the Ministry of Marine Resources, and local government, in this case the Manihiki Island Council. The Island Council's view on how the industry should be developed reflects a traditional belief that Manihikians own and control access rights to their lagoon. The Island Council has refused to recognise the right of Marine Resources to influence any part of the industry on Manihiki. We will analyse how this dispute has developed and influenced the political relationship between Manihiki and Rarotonga.

The second level of our analysis will focus on the socio-cultural impact of the development of the industry. What changes, if any, has the adoption of pearl farming affected on the life-styles of families and individuals on Manihiki? I will study these in a series of case studies of families which participated in the first seeding that took place in October 1987. As part of the socio-cultural assessment I will also study other possible consequences of the development of the industry, such as the potential to attract Manihikians back to their island.

By taking the approach outlined above, I hope to emphasise a different aspect of discussions on development. Development is usually measured in economic terms and, while this is useful as an indicator of

national trends, I feel that development studies should also be concerned with the "grass-roots" effect of the introduction of new industries. I accept that economic development affects social development, particularly in rural or isolated areas such as Manihiki, but feel that the latter is often sacrificed for the former.

CHAPTER TWO : METHODOLOGY

Introduction

Data collection and analysis are, despite the best intentions of the researcher, subjective procedures. The values that a researcher holds, affects the gathering and sorting of information and therefore the end results of the research. In an effort to address this problem, the background of a researcher should be made known to readers so that they can understand better the interpretation of results and conclusions reached during the reasearch.

My involvement with Manihiki is as a resident of Tauhunu village and as a landowner through kinship ties. My family has a small pearl farm in the south-east corner of the lagoon, and we were one of the eight farms involved in the first seeding in 1987. Manihiki has been my home since 1986, when, after completing my undergraduate honours programme at Victoria University, I returned after an absence of 20 years.

The incentive to carry out the study was the chance to gain an increased awareness of the changes going on around me. Also, by attempting to promote understanding of development through the eyes of a recipient, perhaps the problems that have occurred in this case may be avoided elsewhere.

In this chapter I will discuss the methodological framework utilised to undertake the research: how the research design was developed, implemented and adapted. I will then describe the fieldnote file used to bridge the gap between data-collection and analysis, and end with a discussion of the problems encountered during the study.

The final section will be a discussion of the call for more research to be carried out "by both the metropole and the periphery" (Taylor 1981, p-xiii).

Research Design

The research design for the data collection phase had to reflect three variables: the aims and objectives of the study, the population to be studied and the relationship between the researcher and the subject population.

Aims and Objectives

Analysing the political conflict which has surrounded the development of the pearl industry would require a different method of data collection to that of assessing the cultural impact of the industry. Documents and archives would have to be consulted for the first, but the second would require a more qualitatively-based method such as participant observation.

Subject Population

The particular characteristics of the subject population on Manihiki ruled out certain research methods. To carry out a conversation in English with most Cook Islanders is not difficult, and Manihikians are no exception. To ask many Northern Group islanders to read and write in English is a different matter. They do not have the daily contact with the English language that the Southern Group has. My grasp of Cook Islands Maori, and more importantly the Manihiki dialect, is good enough to understand what is being said around me but lacks the confidence to carry out a conversation in Maori. For these reasons, questionnaires were ruled out as a viable strategy.

Researcher to Population Relationship

In this case, consideration had to be given to the fact that I was a member of the community to be studied. It was my place of residence, and after completing the research project I would be returning to live in

'the field'. The data-collection period would be influenced by my on-going membership of the community and could not jeopardise that. (This point is discussed further below).

Research Techniques

The research design arrived at reflected the conditions stated above and combined three different information-gathering techniques: documentary research, participant observation and interviewing.

Documentary Research

To facilitate analysis of the contemporary political situation in which Manihiki finds itself, an understanding of the historical events leading up to the conflict was necessary. Studying oral histories and accounts was one method, but these had to be supported by documentary research.

Material on 19th-century European contact with Manihiki was obtained from the General Assembly Library and National Library in Wellington. In Rarotonga, the Pacific Collection at the Public Library holds some excellent material. The same is probably true of the National Archives on Rarotonga, but obtaining information from there is a matter of persistence and luck. The lack of interest by successive Cook Islands Governments in preserving written records means that the National Archives are under-funded, under-staffed and under-utilised.

On Manihiki, written records were in the same condition as on Rarotonga. Records at the Post Office of money-order transactions were intermittent, and Island Council minutes up to the 1970s are scattered and uncatalogued.

The lack of consistency of records in the Cook Islands was balanced to a certain extent by access to some Government Department records which provided useful up-to-date information.

As each source was consulted, notes were filed according to content under six categories: Shell Trade, Lagoon Tenure, Cook Islands General, Cook Islands Political, Manihiki Historical, and Manihiki Island Council.

Participant Observation

Participant observation was deemed the most suitable method of gathering a wide range of data on the cultural aspects of life on Manihiki. The study began on arrival in April 1989 and ended on departure in July 1989. The brief three month period was forced on me by the constraints of deadlines for completion of the research project.

The brevity of the participant observation phase was compensated for by the fact that I had been residing on Manihiki for substantially longer and had built up a certain familiarity with the culture. Unrecorded and often unconscious observations from before the fieldwork phase came through in my fieldwork notes. An example follows.

Even in a small village such as this with around 250 people, there are still social groups based on locale. Work on houses and farms is usually done by the owners and their neighbours. While not an exclusive event (i.e. no-one else), it is still an observable phenomenon. At Xmas or Gospel Day the village is split into three groups based on residence areas for dancing and singing.

Friendships also appear to be influenced by this despite the village not being more than 1¹/₂ km long and 200 metres wide.

Drinking groups as well.

(General Data 10.6.89)

In this example, an observation on organisation of work for farms prompted recollection of experiences from prior to the beginning of the study.

The significance of choosing this particular period for the study was the harvesting and sale of the first crop of pearls seeded in 1987. It gave me the chance to gauge the effect of the first income from farming for the respective families. (Refer to case studies one, two and three).

Interviews

To obtain more in-depth information, it was necessary to follow up the documentary and participant observation methods with interviews. Officers at various government departments on Rarotonga were interviewed regarding their department's role in the development of the industry. On Manihiki, individuals who would be the focus of a particular case study were interviewed.

The subjects for the case studies were selected in two categories: farmers and migrants. The farmers were those who had participated in the first seeding in 1987. It was reasoned that their involvement in the industry was greater, through having seeded first, and over a longer period, than other more recent farmers who had only seeded in November 1988. They would consequently be the first group to receive any financial return from farming. As a result, it was felt that these individuals would be the most representative sample by which to assess the social impact of the development of pearl farming.

For the interviews with the farmers, a list of topics was drawn up on which responses were desired. The topics covered included income, language, diet, religion, kinship, education, dress, labour allocation, sex roles and housing. While not exhaustive or rigid, the topics served as a guide for the building of information about an individual.

The migrants were selected according to two criteria: they must have returned to Manihiki since October 1987 and they must have begun farming. Also of importance in some cases was the length of time between their last visit to Manihiki and their return. Primary interest was in the motivating factors behind the move.

The same list of topics was used to guide the interviews with those classified as migrants. In addition, several key questions had to be answered: Why had they come to Manihiki and what did they bring with them? How had they heard about the development and how committed were they to the idea of farming?

From participant observation, as much information as could be ascertained was written down prior to the interview. The interview served to confirm and develop the observations as well as to elicit data on topics that could not be analysed by observation, e.g., education levels.

The interviews were relaxed and informal. Each was conducted at the subject's home at a time of his/her choosing, often at the end of the day prior to preparing the evening meal, as this was their most convenient time. I had a list of the topics I wished to cover during that particular interview, and I took brief notes on the responses. These notes were expanded and a transcript of the interview written when I returned home that night.

I began every interview by outlining what my study was about and why I wished to talk to them, i.e., as a farmer or as a migrant. No set order or structure was followed, with the emphasis on keeping the person talking. In this manner, the respondent would provide information on several subject areas without being asked. The following is an excerpt from the transcript of an interview with Metuakore.

When I questioned Metuakore as to what he expected to do with his income from the farm, he replied that he wanted

to finish the family house which was partly damaged by the cyclone, but he was also looking to the future for "the kids". He broadened out into talking about "the kids" and family lands, which is "why I came back". Metuakore was talking about returning from New Zealand in 1977 after 19 years there. We then went on to talk about his time in New Zealand.

(Fieldwork Notes 9.5.89)

From a question concerning income allocation, the subject provided information on land entitlement and his experience overseas. Metuakore's period overseas coincided with his education so, without directly asking, information on this subject was provided.

In all the interviews I kept talking past the point where I had obtained the desired information. I felt this winding down period was necessary to maintain the personal level of contact that had proceeded during the interview and to leave the respondent without any feelings of antipathy towards me or the research.

Fieldwork Notes

The fieldnotes file, developed to record what I would be seeing, hearing and describing while on Rarotonga and Manihiki, proved to be more than I needed. Having consulted various articles (Gillespie 1982, Lofland 1974) and books (Kirk J. & Miller M. 1986, Spradley J. 1980, Whitehead & Conaway 1986) and drawing on previous experience in the field, I was ready for the participant observation to begin.¹

The fieldnotes structure I had devised was in three sections. In the first section, I intended to have a separate file for each case study. In these, the interview for each study would be recorded together with any

¹ Participant Observation was the research technique employed for the major project at Honours level.

background or general information pertaining to the subject. The next section was the General Data section. In this book, a daily record of observations was kept. All aspects of community life on Manihiki were detailed here. The third section was planned as a diary for my own feelings on how the research was progressing as well as a place to conduct some preliminary assessments of data. It would also be a means of keeping track of specific issues that would be brought out in analysis. Any documentary data from records on Manihiki and Rarotonga would be filed according to subject as described earlier (see Documentary Research).

Data collection proceeded smoothly in Rarotonga, and all appeared to be going well despite problems faced in finding transport to Manihiki. The first week on Manihiki followed the same pattern, but by the second week the original structure began to get unwieldy. The diary was proving to be redundant. Observations of life on Manihiki entered into General Data tended to include reflections and basic analysis. The following entry illustrates this:

... How much has the development of farming been affected by the lack of development aid in the form of a 'development expert'? They have been to Rarotonga but not to Manihiki. The drive has come from within and the assistance of Yves cannot be overlooked, nor the previous example of Peter Cummings (Good or Bad?) The lack of development aid is a result of the struggle between Marine Resources and the Island Council....

(General Data 11.6.89)

The danger of having descriptions of life in the subject community mixed with reflections and basic analysis is that one may lose track of the direction and objectives of the research. In this case, the direction of my research was kept on track by the separate accounts of individual case

studies. As each interview was conducted, information from the developing General Data account was utilised in the transcripts. These files then served as a cross-reference for the General Data.

On Rarotonga and in New Zealand, the diary was of more use. It served as a record of sources consulted, timetabling of meetings and assessment of interviews with Government Department Officers. On Manihiki, however, this function was no longer necessary, as primary emphasis was on observation and recording of data as opposed to organisation of the fieldwork.

After completion of the fieldwork phase and prior to beginning the research report, the individual accounts were revised to form the case studies. A content analysis was carried out on the General Data file for examples of particular themes, e.g., political development, cultural change, and for examples relevant to particular chapters of the research report.

Problems

One problem all fieldworkers must face is that of gaining access to the particular population to be studied. Usually this is in the social sense of gaining acceptance into a community, such as the problem faced by participant observers of deviant sub-cultures. However, the problem of access may also be in the geographical sense of reaching the subject community.

The latter was the case with Manihiki. Apart from a ship every six weeks, the only other method of reaching the island is on the privately owned plane of Yves Tchen-Pan. As this carries only six passengers and infrequently, shipping remains the main mode of transport to and from Manihiki.

The only boat was owned and run privately and in December 1988 was wrecked on the island of Nassau. To service the Northern Group, the Government had to step in and hire a ship from Fiji. To compound matters, work on constructing the airstrip on Manihiki had run into problems over land compensation.

In late March 1989, the newly elected Minister of Civil Aviation wished to fly up to Manihiki on a specially arranged flight to resolve the land problems. The Island Council told the Minister that they were not interested in meeting with him unless the M.P. for Manihiki (now in the Opposition) was with him. As the Member for Manihiki was overseas at the time, the Minister did not want to wait, but the Island Council refused him access. The end result was that the Government cancelled all boats and planes to Manihiki until the Island Council realised that "the Cook Islands Government is in Rarotonga and not in Manihiki" (C.I. News 29.3.89, p-12).

The cancellation of all services to Manihiki coincided with my arrival in Rarotonga bound for Manihiki. The dispute continued for two weeks before the Government, under pressure from Manihikians on Rarotonga, backed down and allowed the boat to sail. No regular service has been resumed, however, with ships from outside the Cook Islands still being leased on a short-term basis. Nor had work on the airstrip been resumed by August 1989.

The other methodological problems associated with conducting the research concerned the conflict between my role as a researcher and my on-going membership of the community. These will be discussed in relation to the benefits to my research from being a member of the community. While this discussion is specific to my case, I believe this discussion may be relevant to researchers in other social settings.

Community Membership: Advantages

In recent times more emphasis has been placed on promoting research of the Pacific by Pacific Islanders. Crocombe stated the advantages of this when he said, ".but double benefit is gained if the researcher is the researched - or at least is part of the researched community " (Crocombe 1987b, p-113).

The problem of access (as mentioned briefly above) is minimised if one is a member of the community. No time is lost building up relationships of trust, which are often crucial to establishing validity of one's observations (Johnson, 1975, p-84). If one is already known as someone who can be trusted, respondents are far more likely to reply openly and honestly to questions.²

Researchers going into the field utilise contacts or, in isolated communities, host families. These people will act as guides and as 'middle-men' to facilitate acceptance. By being a member of the community and already having established contact with them, a researcher has no need for an intermediary.

The logistics of planning and conducting a study are easier if one is already familiar with the subject community. While in the field one is not dependent on anybody for support. I had a family house and was able to stay with my immediate family, greatly reducing financial cost as well. Having previous experience of the harsh conditions of atoll life was also important.

Through being a member of the community I had knowledge in greater detail of the subject matter of my study. For example, in the case studies, I was able to describe the respondents in greater depth through

² This also applied when contacting Government Departments. Through prior contact with Marine Resources and as a worker for them on Manihiki, a history of credibility was established. They were therefore willing to open up their files to me.

previous experiences. This insight hopefully adds to the validity of the study.

In every study conducted through participant observation, there is some influencing of results through the interaction of researcher and setting. Whitehead and Conaway state the need for continual assessment of this interaction while in the field in order to reduce the biasing effect (1986 p-1). Most studies, however, discuss this effect in a cross-cultural framework where the researcher is not normally a member of the community. As an 'insider' conducting research while being part of the community, this potential source of error can be reduced.

Community Membership: Disadvantages

The most obvious disadvantage of being a member of the community under study is that one may lose the impartiality that a more detached observer will have. Through over-familiarity one may take some events or behaviours for granted and so miss the significant social phenomena that a non-member would notice.

An outsider coming into a community has the advantage of a fresh start. As a member of the community, one is located within the social network of relationships that mark one's position in that society. One is identified by other members of the community as part of a particular family or group. In my case, as a *mapu* (youth) I was unable to ask certain questions of older members out of respect. For example, questions on how they spent their money might have offended them. To circumvent this, I had to devise other methods of eliciting the information, such as the interviewing format described above.

Also, as part of the social network I naturally became friendlier with some people than with others. Accordingly, when the study began, I was already defined in a certain manner by my respondents. This can

prejudice results in a manner which a non-member would not immediately face.

As part of the community one is aware of other people's spheres of influence. If one intrudes on Manihiki, one is accused of "doing someone else's job". Protection of their sphere is vital to residents of a small, close-knit community, although to outsiders this is often seen as petty and small-minded. If intending to return to the community, a researcher cannot afford to get on the wrong side of individuals. As a result, I was perhaps less persistent than an outside researcher would be.

Another factor to be considered when conducting research in one's home community is that the community still places the same amount of demands on one's time as before. This is heightened in an isolated community where most work is labour intensive. In Manihiki, absence from community work projects is soon noticed and commented on.

In my case, I also had the demands of working a farm. In our section of the lagoon, there are three farms which function as a work co-operative. All costs are born individually, but the work is shared and conducted together. I had to maintain these social obligations as a part of that group. Obviously an outside researcher would not be under the same obligations to maintain a presence as part of the community.

The above discussion reflects my particular position. Some of the factors described above may be applicable to participant observers who are not a part of the community they study. In those cases however, it will be decided by how immersed the researcher becomes in the role of participant as opposed to observer. The discussion suggests that research carried out by students or researchers from the periphery should still be combined with research conducted by those from the metropole.

CHAPTER THREE : THEORIES OF DEVELOPMENT

Introduction

Theories of development can be found in many academic disciplines, ranging from economics and political science to history, geography, anthropology and sociology. What distinguishes sociological theories of development from other epistemological concerns is the focus on the social development or social change occurring within the object of study. However, to illustrate clearly the processes at work in a social setting often requires drawing on several approaches, for example, the need to account for historical and economic factors which have influenced development, when describing a contemporary development problem.

In this chapter I will discuss the various sociological theories of development and assess their relevance to the particular situation on Manihiki. Discussion will not be restricted solely to sociological theories, however, as I believe that a multi-disciplinary approach is needed to fully understand the specific nature of problems faced by developing Pacific Island nations.

To paraphrase an old quotation: "No island is an island unto itself." Development does not occur in a vacuum. Manihiki's development is part of the development of the whole Cook Islands, which in turn is influenced by inter-national developments around the Pacific and the world. In discussing development theories we will reverse this process. Macro-sociological theories will be reviewed prior to discussing work done with a Pacific orientation. I will then move on to theories which specifically discuss the Cook Islands, and end with a brief look at an area of concern central to Manihiki's development, that of migration.

Development Theory

The development of the Sociology of Development has been marked by the growth of two disparate theories based on differing perceptions of the level of development of certain countries. These countries, commonly labelled the 'Third World', are found in Latin-America, Africa and Asia. One theory viewed these countries as essentially backward because of their lack of exposure to 'Western' values. It therefore proposed that they could be modernized along Western capitalist lines, hence the label Modernization Theory.

The opposing view was that the Third World was underdeveloped because of its involvement with Western capitalist societies. These countries would remain underdeveloped and therefore dependent on the developed nations as long as the links continued. This approach was called Dependency Theory.

A more detailed analysis of these theoretical approaches is needed, as they have been central to all discussions in Development theory.

Modernization Theory

Modernization theory is based on a dichotomous categorization of societies which draws on the work of Emile Durkheim and Max Weber. The dichotomy involves contrasting a 'traditional' and a 'modern', or industrial society. Through this contrast and comparison theorists hope to highlight the processes of development that enables the former society to evolve into the latter.

Durkheim and Weber both distinguished between traditional and modern societies on the basis of a "fundamental contrast of ideas and values" (Webster, 1984, p.49). It is the role of ideas and values in the development process that modernization theory centres on. Two of the most influential proponents of early modernization theory were Talcott Parsons and Neil Smelser.

Parsons sought to create a typology of social structures by which, through differentiation and comparison, he could classify social systems. Of prime importance in categorising the social structures were the value-orientation patterns that Parsons assumed dominated in a particular society. Therefore, a traditional society had a value-orientation based on ascription, while an industrial society's pattern was based on achievement. These value-orientations were also reflected in the distinct societal natures generated by the patterns :

... one way of broadly characterising the differences between the achievement-universalistically and the ascription-universalistically oriented types of society is to say that the first is 'individualistic', the second 'collectivistic'.

(Parsons, 1951, p.194)

Parsons did not describe the societies where value-orientations were mixed or in transition from ascription to achievement, but proposed the distinction as an ideal type from which to begin comparative analysis.

By also using the concept of structural differentiation to construct ideal types, Smelser formulated a model of the social changes resulting from economic development. He proposed that economic development of a society was accompanied by four processes: increased technology, commercialization of agriculture, industrialization and urbanisation. These processes affected social change in three ways:

- (1) Structural differentiation, or the establishment of more specialised and more autonomous social units.
- (2) Integration, which changes its character as the old social order is made obsolete by the process of differentiation.

(3) Social disturbances - mass hysteria, outbursts of violence, religious and political movements, etc. - which reflect the uneven advances of differentiation and integration respectively.

(Smelser 1963, p.354)

An example of Smelser's model is given by the alteration of the kinship system when economic development occurs. As an economy develops, the economic activities that in traditional society were carried out by the household are removed when the introduction of money crops differentiates between roles of production and consumption. The family ceases to be an economic unit of production and becomes more specialised through being "more concentrated on emotional gratification and socialization" (Smelser 1963, p.359).

The problems created by the alienation of family members from their families as role differentiation occurs are resolved through the creation of various integrative agencies. Smelser claims modernisation creates dozens of institutions and organisations such as labour unions, welfare, government regulation, and co-operative societies which take over the integrative role previously fulfilled by the kinship structure. If the integrative agencies are unable to keep pace with the differentiation process, then social disturbances will occur.

Modernization, therefore, is a result of the interaction of differentiation and integration. Through differentiation, traditional roles, values and structures are replaced by new ones more conducive to development. As the development process occurs, the new roles, values and structures are united through integration to form the new, developed society.

Modernization theory broadened in its focus during the 1960s as its popularity grew. Transitional stages in the development from traditional to modern were proposed by Rostow (1960) and Lerner (1964). Another refinement was Hoselitz's (1960) and Eisenstadt's (1966) attempts to account for the variations that emerge in societies under the development process.

Modernization theory's popularity sprang from its utility for various development agencies. It justified the role of the developed countries in encouraging development along Western societal lines. Consequently, the theory supported aid policies such as capital grants, training of entrepreneurs in various fields of agriculture and industry, and expansion of educational programmes. In this manner the modernisation approach became established "in a virtually impregnable position in academic circles" (Webster, 1984, p.56).

It was not until the late 1960s and early 1970s that an alternative to modernisation theory arose. While many criticisms have been made of the theory, a few that are relevant to this particular study will be discussed.¹

The first is the contention that, as a society develops, the traditional values, beliefs or patterns will be replaced by modern attitudes. This may not always be the case. Some traditional values may persist and may be harmonious to the development process. Webster, citing Gunder Frank, uses the example of Japanese industry, where initial employment was based on achievement criteria, i.e. individual qualifications. Subsequent to that though, promotional prospects within the company became based on ascriptive factors such as age and background (Webster, 1984, p-58).

¹ For a comprehensive critique of modernisation theory refer to Long (1977), Roxborough (1979) and Webster (1984).

Some traditional behavioural patterns may in fact be reinforced by development. Salisbury showed that new technology in the form of steel axes to replace stone axes in Papua New Guinea, resulted in decreased labour time and increased time spent on traditional ceremonies and rituals. (1962, p-119).

With regard to the traditional kinship structure, the pressure that it faces under modernisation presumes that the extended family will be superseded by the nuclear family as industrialisation and urbanisation occur. Long has found however that the extended family can adapt to these pressures and survive in the modern economic context by enabling "individuals to mobilize capital and other resources essential for modern capitalist enterprises" (Long, 1977, p.37).

What the above criticisms imply are that a theory based on a rather simplistic classification of 'traditional' and 'modern' will be of limited use when examples of both can be found co-existing within the same society. How and why they do needs to be explained, and dependency theory attempted this.

Dependency Theory

Dependency theory has been the focus of most attention in the body of work known as Underdevelopment Theory.² This approach utilises a Marxian form of analysis in looking at how capitalism developed internationally by exploiting the economic surplus of the Third World. It proposes that an understanding of contemporary problems in the Third World must be based on a socio-historical analysis of the impact of "West European mercantile and industrial capitalism and the colonization of the Third World by these advanced economies" (Long, 1977, p.71).

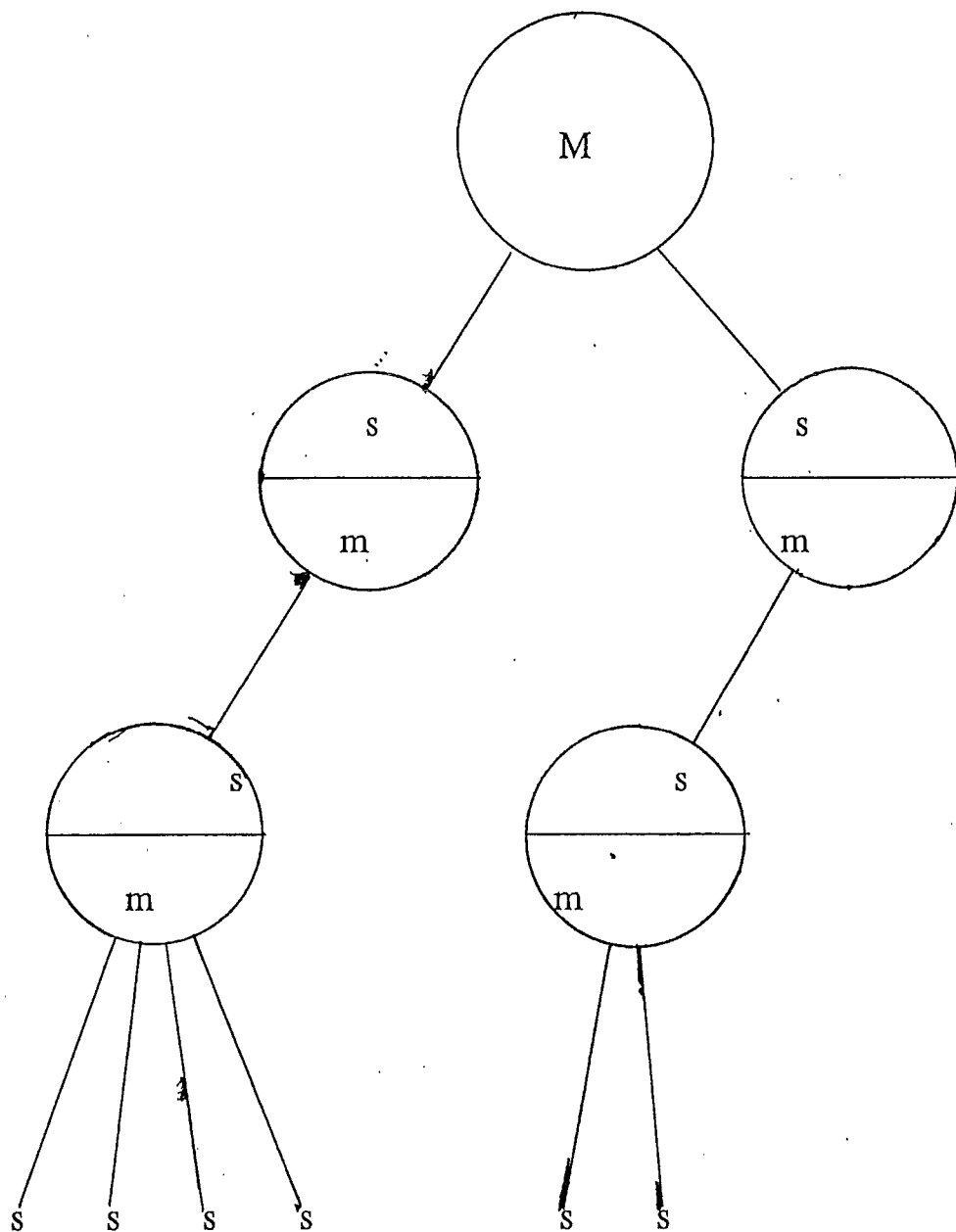
² For a more in-depth review of underdevelopment theory refer to: Bernstein (1973), Oxaal et al (1975) and Roxborough (1979).

It was through the process quoted above that the highly developed nations of the world today built their development on the underdevelopment of the Third World countries. Early traders as part of colonial empires introduced Western currencies, lifestyles and, most importantly, trade patterns oriented towards the dominant countries of Western Europe. The natural resources of Africa, Asia and the Americas were exported in return for manufactured goods.

Thus, the underdeveloped countries came to be dominated economically and politically by the developed countries, and a dependency relationship was established. This relationship has been portrayed in a centre-periphery manner, with the developed countries at the centre.

Dependency theory, as a branch of underdevelopment theory, grew out of a concern by Latin-American economists that development of their countries was over-oriented outwards. They proposed that Latin-America was supplying raw materials and foodstuffs to the industrial nations and in return was receiving less and less manufactured goods. When this pattern of outward orientation was interrupted (through war or economic depression), there was a growth in industrial development within their countries. Yet as soon as links between the centre and the periphery were re-established, the pattern was resumed. (Refer Roxborough, 1979, pp 25-29).

This argument was taken up, expanded and applied in sociological terms by Frank. He suggested that a whole chain of metropole (centres) and satellites (periphery) ran from the world metropolis right down to the isolated village in the outback. In this manner,

FIGURE 4Frank's Metropolis-Satellite Model

Key: M- The world metropolis
m- metropolis
s - satellite

Source: Blomstrom and Hettne (1984, p-69).

... there results a regional concentration of development and underdevelopment, there also develop developed sectors in underdeveloped regions and underdeveloped sectors in developed regions as the products of the same process of uneven capitalist development.

(Frank, 1975, p.43)

Figure four illustrates how each metropolis and satellite are linked. The important factor in the relationships between them is that the metropolis develops through expropriation of the economic surplus produced by the satellite, which therefore becomes increasingly dependent. The dependence is matched by a greater concentration of political power and social resources in the metropolis.

Frank's work was taken a step further by Immanuel Wallerstein. Wallerstein took as his central tenet that there is only one world economy and accordingly one world system. He avoided distinguishing between the separate development of developed and underdeveloped regions and instead proposed that all nations were part of the one capitalist world system. The world system consisted of core-states, semi-periphery and periphery which existed in a relationship not unlike Frank's metropolis-satellite proposition (Wallerstein, 1974).

Development in the core, semi-periphery and periphery states is determined by the global division of labour and how it acts to reproduce or alter the relations of production. Hence

... world-scale production relations reveal an over-arching patterning of the processes such that some areas appear as cores or centres in virtue of the many relational sequences leading from or to them, while others appear as the hinterlands of these centres in virtue of the small number

of relations leading from or to them and locating them as arenas of world-system activities.

(Wallerstein and Hopkins, 1982, p.45)

The relational sequences outlined by Wallerstein and Hopkins are the flow of material goods from periphery to core, which reflects the unequal exchange on the world market created by the global division of labour.

While dependency theory has replaced modernisation theory as the predominant concept in the Development literature, it has still been the subject of much criticism. The main criticism that can be levelled at dependency theory is that it is overly deterministic. It does not allow for the influence of internal socio-cultural factors in development. As will be shown later, this can be crucial in specific development situations. Each country or region has its own particular socio-cultural traits which would have interacted and influenced initial capitalist penetration to produce unique development patterns.

Part of these development patterns may be the existence of other forms of domination and socio-economic relationships than those propounded by dependency theorists. Long describes how tenant workers on haciendas in Peru developed relationships among themselves and with other non-resident peasant families for economic, religious and social purposes (1977, p-103). These relationships are generally ignored due to the hierarchical nature of dependency theory.

The determinism of dependency theory also does not allow for regional/peripheral influences on political, economic and social development. Within a national political system the balance of power may be held by representatives from the periphery. How they act in their own interests, particularly with regard to rural development, needs to be accounted for in any development theory. At the international level, the same could be said of certain peripheral countries. The petroleum crisis

of the early 1970s is an example of how the balance of power is not always with the 'centre'. In those situations, who was dependent on whom?

Just as modernization theorists failed to account for the persistence of traditional values in the modern setting, dependency theorists have also failed to recognize the persistence of various modes of production. As Long points out, an analysis based on production rather than exchange may be required in some cases (1975, p-278). The multi-structural nature of some societies where non-capitalist and semi-capitalist modes of production exist along with a capitalist mode is not accounted for by dependency theory.

The problem of applying development theory to a study of particular Pacific Island countries is that we are essentially importing theoretical constructs designed to explain developments in other societies totally removed and with very little similarity to our subject one. Development theorists have focussed on the Third World which has traditionally been defined as including Latin-American, Asian and African countries. If the Pacific is considered, it is in combination as Asia-Pacific (M. Meleisea, pers.comm.)

An example of the shortcomings of attempting this theoretical transfer can be seen in the criticisms of modernisation theory given above, where it fails to account for the existence together of traditional and modern values. Cook Island society is marked by this combination, as can be seen in the kinship structure. Long pointed out that the extended family may continue to function in the modern social setting (refer above). To do so, it must adapt, and one of the adaptive strategies has been described by Loomis as "transnational corporations of kin" (in Watters, 1987, p-37). These are where extended families have members located in different countries and in their allocation of resources and

transfer of incomes between units of the group, resemble transnational corporations. With regard to Manihiki, Underhill studied this as a particular strategy of multi-local households (Underhill, 1989).

Similarly, dependency theory alone is not enough to explain particular contextual variations in the Pacific. Industrialisation, for example, as a process of development, has failed to occur in the Pacific Islands more because of their small size, limited resources and small untrained workforce than because of their links to the highly developed nations.

Despite all their shortcomings, some advantages can be gained from studying development theory, and these will be pointed out further on in our discussion. Having reviewed the main debates, albeit in a very brief manner, we will now discuss some theories that are more specifically oriented to the South Pacific. These ideas are from associated disciplines such as geography and economics.

Smallness Theory

Analysis of an atoll economy like Manihiki must take account of how size and isolation have affected its development. Shand has been at the forefront of discussions along this line. He proposed that the 'smallness' of a country could be determined by looking at three factors: population size, geographical size, and the size of the economy. By highlighting these three aspects, the constraints placed on development by smallness could be realised (Shand, 1980, pp 13-17).

Shand discusses constraints on development at a national level, but this analytical framework can be applied at a regional level, as Lewis has done for Atiu in the Southern Group (Lewis, 1988, pp 46-50).

Population

There are two effects of smallness in population. First it restricts the total volume of marketed and exported commodities, which results in high costs of processing, marketing and distribution. This leads to a weak competitive position for the country internationally. Second, the smaller the population, the less likelihood there is of specialist services being offered privately, e.g., doctors, dentists. The onus is therefore placed on an already debt-laden government to provide these services.

Geographical size

Small land area restricts the range of production conditions and therefore the range of commodities produced. Exports become concentrated in specific markets, which means that the country is economically less able to adapt to fluctuating market conditions. Another consequence of small size is the increased potential impact of natural disasters such as cyclones or tsunamis. In a country such as the Cook Islands, one cyclone can restrict national output of export commodities for two or three years.

Economy

The economies of scale that operate in larger countries are reversed in small island states to become "diseconomies of scale" (Shand, 1980, p.16). In the private sector this is expressed in a small internal market, which inhibits development of an industrial sector and promotes reliance on imported manufactured goods.

The diseconomies of scale become more marked in the public sector. In larger countries, when economic infrastructure (airports, roads, communication networks) are provided, an increase in production is the anticipated result. Similarly, government subsidies to initiate projects are often temporary and can be withdrawn as private businesses take over. As Shand writes, this may not be the case in small countries.

In small island economies, the volume of output generated may neither enable capital costs to be recovered nor be sufficient to attract traders and processors. Provision of these services may then necessitate a permanent subsidy.

(Shand 1980, p.17)

In the Pacific, the effects of the above factors can be exacerbated by the extent of fragmentation within a particular country. To this end, an island such as Niue would, relatively speaking, be in a more advantageous position than geographically scattered countries such as the Cook Islands or Kiribati.

Shand's analysis highlights the problems that countries such as the Cook Islands face in economic development. All the constraints described have a flow-on effect for Manihiki. The disadvantages of a small population, minimal land area and a limited economic base are intrinsic to living on a coral atoll. These factors are made worse by Manihiki's isolation from Rarotonga with the consequent transportation and communication problems.

What this thesis will point out, however is that this isolation has not always been disadvantageous and has been utilised at certain times to facilitate development.

The final framework of analysis that we shall consider in this section is that developed by geographers to explain specific developments in the South Pacific.

Mirab

The Mirab model as proposed by Bertram and Watters (1985), and Watters (1987), is the latest and currently the most relevant analytical framework for discussions of development in the Cook Islands.

Mirab is an acronym for migration, remittances, aid and bureaucracy. The combined effect of these processes has influenced, and will continue to influence, the development of some South Pacific Island nations to the extent that they can be classified accordingly. The five countries concerned - Cook Islands, Kiribati, Niue, Tokelau Islands and Tuvalu - are also characterised by their close integration or dependence on a former colonial power. In the Cook Islands case, it is New Zealand.³

With respect to the Cook Islands, Bertram and Watters provide some useful data to support their analysis. In 1981, 44 percent of island-born Cook Islanders were resident in New Zealand (Bertram and Watters, 1985, p-502). This massive migration has produced "dual but not separate communities" (ibid, p.503). Links between the home community and the migrant community in New Zealand are maintained through letters, frequent visits, and remittances.

The large numbers of Cook Islanders resident in New Zealand remitted back an amount equal to 14 percent of all imports for the Cook Islands during the year 1982. On a per capita basis, this was equal to NZ\$226 (ibid, p.506). This figure is less significant than the amount of overseas aid money. From 1980-84 aid was equivalent to 38 percent of recorded Cook Island imports. The aid money was in the form of grants from various agencies and countries and in most cases it went directly to the government for budgetary assistance (ibid, p-507).

In each of the five countries studied, the government sector was the major employer. In the Cook Islands 52 percent of the paid labour force was employed by Government in 1981. In the Tokelau Islands the figure was over 90 percent, over 80 percent in Niue and Kiribati, and over 60 percent in Tuvalu. (ibid, p-500).

³ Niue and the Tokelau Islands are also linked to New Zealand, while for Kiribati and Tuvalu, the former colonial power is the U.K.

The emergence of the Mirab system over the last 20 years can be seen in three structural changes undergone by Cook Islands society. The first is in the kinship structure. The migration process has led to various members of a family unit being employed in differing occupations and locations within the Cook Islands and overseas. Each member is not isolated, however, and instead regularly contributes to the maintenance of the unit through cash or kind.

The second effect is in the development of combined modes of production. The subsistence mode has not been destroyed but now exists in concert with the capitalist mode. As such there is a

... high degree of overlap and inter-penetration between modern and subsistence sectors. Public servants and other participants in the cash economy live in the village, retain access to land and participate in village activities. Specialisation and division of labour in other words, is incomplete.

(Bertram and Watters, 1985, p.511)

The final effect is a broadening of the economic strategies open to island households. Accordingly, household units will allocate labour to occupations that are perceived as being commercially more viable. The opportunity to earn a cash income from government employment or in the private sector will be favoured over traditional occupations. Consequently, agricultural production could be expected to experience a decline.

While Mirab theory is still in its infancy, and far more field research needs to be conducted with regard to it, the analytical focus does provide some relevant concepts for discussion with regard to this research. However, it must be remembered that Bertram and Watters have conceptualised their island groups as homogeneous units. Within the Cook

Islands a great deal of variety may exist along the Mirab model, as will be shown by applying the model to Manihiki.

An example is the migration process, which in Manihiki's case has created three, not two, communities. Internal migration patterns create a community on Rarotonga which acts in the same manner as the overseas community. For some people, Rarotonga is a stepping-stone to overseas travel, but in other cases it is a permanent base.

The final body of work I wish to consider is part of the Mirab process; that of migration theory. In this particular instance the focus will be on an apparent reversal of migration trends.

Migration

One of the potential effects of the cultured-pearl industry is the ability to encourage Manihikians overseas to return to Manihiki. As shown in the introduction, population changes in Manihiki have been linked to the productive state of the lagoon (refer Table 3). During the 1950s the population of Manihiki doubled, with most immigrants coming from neighbouring islands in the Northern Group. While it is still too early in the development of the industry to gauge if this influx will be repeated, evidence suggests that the process of return migration has begun.

Migration patterns for Pacific Islanders have generally taken three forms (Crocombe, 1989, pp 14-15). First, within the home country there is migration from small islands to large ones, leading to a centralisation and concentration of the population. Second, there is an intra-Pacific Island movement from islands with few employment opportunities to those with more, e.g., from Kiribati and Tuvalu to the phosphate mines on Nauru. Finally, there is the movement from the small Pacific Islands to the larger bordering countries such as Australia, New Zealand and the USA.

The incentive for this massive movement has been related mainly to employment. For Cook Islanders this has meant a relocation of nearly

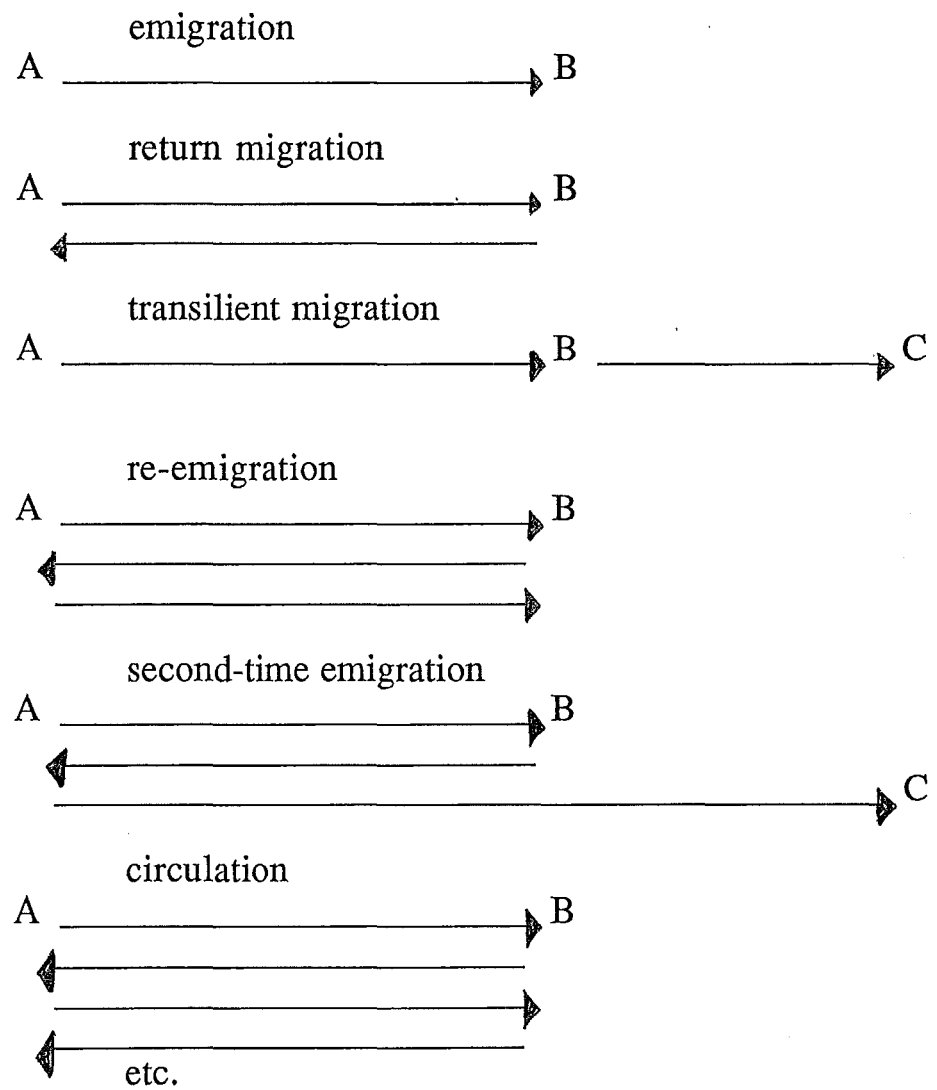
half the population. This national trend may be changing, however, and in Manihiki's case evidence has been given to indicate that during the 1980s circular and short-term mobility has been more common than permanent outmigration (Underhill, 1989, p-77).

While the focus of this study is on the reversal of the migration pattern as a whole, some conceptual clarity should be attempted. In this regard we will use the terms set down by Frank Bovenkerk (1974). He defined return migration as "when people return after emigration for the first time to their country (or region) of origin" (Bovenkerk, 1974, p.15). Bovenkerk distinguishes between return migration and other related concepts such as transilient migration, re-emigration, second time emigration and circulation (refer Figure 5). Emigration is a movement from a persons country of origin to another country, or within a country, from region to region. Transilient migration is a further move to a new destination. Under these definitions and by adopting a regional level of focus, this study will include migrants within the first three categories.

As the focus is on Manihiki, Manihikians moving from Rarotonga to Manihiki for the first time who have not previously lived on Manihiki, are emigrants. Such a person is Arthur in case study two. Harry (case study one) could then be classified as a transilient migrant, as he was born on Rarotonga, emigrated to New Zealand and is going to Manihiki for the first time. Other recent immigrants to Manihiki would qualify as return migrants, as all have lived there before.

Having clarified the area of study, I shall shift to an analysis of the motivational factors associated with the move to Manihiki. These motives are generally labelled 'push factors' (negative factors in the host country encouraging return) and 'pull factors' (attractions in the place of destination) (Gmelch, 1980,p-140).

FIGURE 5

Migration Patterns

Source: Bovenkerk (1974, p-5).

Also of importance are the characteristics of the returning migrants. Were they 'successful' or 'failures' in the host country?

The implications of the motivations and characteristics of migrants for the home country are important when issues such as 'brain-drain' and 'brain-gain' are discussed. Are the returnees well-educated or in possession of technical expertise that may benefit the society they are returning to? How much innovative change will occur as a result?

An example of the importance of motivations and characteristics is Nina Toren's study of returning migrants to Israel from the USA (Toren, 1976). She found that the pull factors dominated over push factors in initiating movement of the migrants. Toren's results also indicated that the return movement was non-selective, i.e., return migrants resembled the migrants still abroad in terms of educational and occupational criteria.

What was more important for Toren, and what is relevant to this study, was that the decision of the better educated and occupationally higher ranked migrants to return was influenced more by occupational and economic factors in the home country than by patriotic feelings. The lower status migrants, however, were motivated mainly by the latter. The effect of this for Israel was that the higher status migrant's return was likely to be temporary. Conversely, the lower status migrant was "more inclined to perceive of his homecoming as the end of the journey" (Toren, 1976, p.557).

If it is the development of the cultured-pearl industry that is the prime reason for the migrants movement in this study i.e., economically motivated, what will be the consequences for Manihiki? These will be discussed in the next chapter.

Conclusion

Theoretical attempts at conceptualising the Pacific micro-state's place with regard to development theory are still at an early stage. Macro-sociological theories such as modernisation and dependency theory, have not been applied and tested in great detail with regard to the Pacific. Moreover, when conceptualising the Third World, theorists have not specifically considered the Pacific. Modernisation and dependency theory are attempts to explain developments in Latin-America, Africa and Asia, accounting for those areas' various socio-economic and historical conditions.

What can be of most use when studying the Pacific, from modernisation and dependency theory, is parts of each approach to the study of the development problem. For instance, the emphasis on value structures in Modernisation theory and their persistence or elimination, can be useful for studying Manihiki. Will Manihiki be able to maintain its extended family network, its community based organisation and work ethic or its adherence to traditional customs? What will be the effect of, not industrialization, but monetisation and increased technology on those social structures?

This strategy, taken from the modernisation approach, needs to be combined with an historically based socio-economic analysis of how Manihiki has developed with regard to Rarotonga. The communication and transportation networks as well as political control, which all centre on Rarotonga, place Manihiki in the periphery or as a satellite. How this relationship is reproduced or affected by contemporary socio-economic development will be discussed. Thus, a use can be found for some aspects of dependency theory by not adhering to its overly deterministic approach

and by realising the ability of individuals to affect the development process.

While this piecemeal approach may be criticised as lacking a definite theoretical orientation, it does not make the results less relevant, valid or reliable than they would be had I adhered strictly to one theoretical approach with all its consequent limitations. Perhaps this could be the beginning of the synthesis that is so badly needed to explain Pacific Island development and which the Mirab framework appears to be heading towards.

CHAPTER FOUR: POLITICAL DEVELOPMENT

Pre-Contact

The conflict between local government in the shape of the Manihiki Island Council, and central government, as to who should control the cultured-pearl industry on Manihiki has a history that stretches back over 100 years. The issue of lagoon rights for individual families is based on traditions that pre-date the coming of the European.

Pre-contact material is scarce, and we have only oral traditions and some writings of early European contact. Prior to the monetisation of pearl-shell by English and French traders, it appears that Manihikians used it for decorative as well as utilitarian purposes. Inlay work was carried out on drums, canoes and paddles. Emory describes bowls with inlay work which used a process that appears to have been unique to Manihiki and Rakahanga (Emory, 1937, p-20). On a more practical note, fish hooks and lures and *tuai* (coconut scraper) were made out of pearl-shell (Buck,1932, p-88). The *tuai* is an instrument used for grating the flesh of the coconut for sauces or drinks (ibid).

There may also have been some movement of pearl-shell around the Cook Islands. Gill describes Mangaian brides with pearl-shell decorations (1892, p.12). Bellwood, in excavation work carried out on Rarotonga, found evidence of early pearl-shell fish-hooks (1978, p.135) As pearl-shell does not grow in the Southern Group of the Cook Islands, it could only have come from the Northern Group or from what is now French Polynesia.

Access to the lagoon in pre-contact times appears to have been dominated by women. Cooper writes that "lagoon fishing was the province of the weaker sex" (1882, p.331). This would have pertained to

the harvesting of the pearl-shell and the giant clam, (*Tridacna maxima*) or *pahua*, for food. However, once the monetary value of pearl-shell was known, Manihiki men rapidly took over and became skilled at obtaining it. Moss talks about the skill of Manihiki and Penrhyn male divers but also wrote "they cannot stand the work of diving for more than a few years altogether" (1889, p.67).

As recently as 1929, when Sir Peter Buck visited Manihiki, the diving for *pahua* was still a woman's job (Buck, 1932, p.38). Some old people on Manihiki can still remember these times but stated that sometime between the two world wars the task of *hopu pahua* (clam diving), was taken from the women. With a demand for the dried meat of the *pahua* in Rarotonga, the task was given to the *mapu tane* (young men), to perform on the grounds that they could do the job quicker (Temu Piniata, pers. comm.).

Oral traditions indicate that during pre-contact times, areas of the lagoon were linked to land tenure systems. Rights to the lagoon were shared between the two ariki on Manihiki, Tefaingaitu and Tefakaheo¹ (Matheson, 1987, p.170). Prior to missionary contact, families lived on every island around Manihiki and extended their boundaries out into the lagoon to particular coral heads. Other coral heads and *motu* (islets) in the centre of the lagoon were owned by different families who named the *motu* after themselves.² While individual families held access rights to certain areas, overall charge belonged to the particular ariki to whom that family owed allegiance (Temu Piniata, pers. comm.).

The *ariki* was responsible for the welfare of the land as well as for the food-productivity of the sea (Buck, 1932, p-49). He was the

¹ In this study we will follow the spelling as outlined by Kauraka (1987, p-135) with the phonetic wh sound spelt as an f.

² These names are still in existence today.

spiritual and political head of the group of families who lived within his area. Under him, he had a group of sub-chiefs (*mataiapo*), who were responsible for the enforcement of his decisions (ibid, p-48).

Once the pearl-shell became a valuable commodity, divers required permission to work in another family's area. As payment, they would provide some of their shell to the owners (Sims, 1988b, p.7).

1901-1945

The annexation of the Penrhyn Islands (Penrhyn, Rakahanga, Manihiki) by New Zealand in 1901 signalled the beginning of the predominance of Rarotonga as Manihiki's main link to the outside world. Prior to this, Tahiti had been the centre for trade in the Northern Group (Cooper, 1882, p.330, Gilson 1980, p.44). France even attempted to annex Manihiki, but the raising of the British flag by a native L.M.S. missionary prevented this (Buck, 1932, p.10).

As a result of the shell and copra trade New Zealand wanted to keep a close eye on the islands in the Northern Group. Prime Minister Richard Seddon, in a letter to Resident Commissioner Walter Gudgeon, encouraged him to enforce closed seasons in pearl-shell fishing on Penrhyn and Manihiki (C.I. Ann.Rep. 1902, p.29). Gudgeon's response was to draw up rules for the management of the industry through the Federal Council.³ These included, amongst other things, a minimum harvestable size of 4.5 inches, licence fees, inspection criteria and cleaning restrictions (ibid., p.58). Most of these rules were aimed at the traders, however, and did not really affect access or ownership rights.

³ The Federal Council consisted of Southern Group *ariki* and the New Zealand appointed Resident Commissioner.

Individual family ownership, although never legalised, was recognised in one of the ordinances passed by the Federal Council in 1902.

It shall not be lawful for the owners of the lagoon, or any part thereof, to lease the same to any one man to the exclusion of the remaining traders. Any lease shall be null and void.

(Section 10, Ordinance no. 4, Appendix to the JHR of New Zealand, 1902 vol. I, p.58)

What did affect the ownership rights was the Proclamation of 1906 which set aside all the lagoon areas of Penrhyn and Manihiki as public pearl-shell fisheries (C.I. Ann.Rep. 1906, Vol I p.30). Management was vested in the Resident Agent and Island Council of each island with all matters subject to the approval of the Resident Commissioner.⁴

The reason given by Gudgeon, in his proposal to the Minister for Island Affairs, for the abrogation of family rights was that

The policy of the so-called owners of the shell-beds is to take no more shell than will provide them with a good living, and I submit that this policy is in direct conflict with the interests of the government of the Group.

(C.I. Ann.Rep. 1904, Appendix to the JHR of New Zealand, 1904 vol. I p.72)

Despite the proclamation and the official seizure of control by Rarotonga, it is doubtful how much of this would have filtered through to

⁴ The positions of Resident Agent and Island Council were created in 1902.

Manihiki. The shell trade was stagnant at this time, and the Manihiki lagoon was slowly recovering from being nearly exhausted of pearl-shell (C.I. Ann.Rep. 1902, p.47).

In fact, family tenure patterns continued well into the 1920s before Resident Agent Henry Williams attempted to enforce the legislation and break up the traditional pattern of lagoon ownership. This was strongly resisted by the Manihiki community, but to no avail (Sims, 1988b, p.7). Manihiki was now firmly within the boundaries of New Zealand and was part of a growing administrative presence centred on Rarotonga. The traditional leadership and control previously exerted by the ariki was now largely symbolic. His spiritual functions had been usurped by the missionaries, who had also instigated changes in the political structures which gave power to others (Moss, 1889, pp.110-119). The Church would not have acted against the Government, so apart from election to the Island Council, the people had no way to seek redress. The feelings engendered by the removal of their traditional ownership rights would endure, however, and would re-surface in contemporary times when lagoon rights again became an issue.

1946-1983

The decade 1946-55 was a boom time for Manihiki. Over 2,300 tons of shell was taken from the lagoon; more than twice the amount removed in the previous 45 years. Ships were calling on a more frequent basis, and other Cook Islanders were attracted to Manihiki. From a population of 498 in 1950, the number jumped to 816 in 1951, and did not decrease until 1956, when it dropped to 661 (refer table three).

TABLE 3

AMOUNT OF MOTHER-OF-PEARL SHELL EXPORTED
FROM MANIHIKI WITH CORRESPONDING POPULATION
SIZE 1945-1986

Year	Amount (Tons)	Pop.	Year	Amount (Tons)	Pop.
1945	10	435	1966	0	584
1946	48	455	1967	0	
1947	89	454	1968	0	
1948	174	473	1969	120	
1949	228	484	1970	0	
1950	273	498	1971	0	452
1951	380	816	1972	0	
1952	288	841	1973	0	
1953	294	838	1974	?	
1954	271	864	1975	0	
1955	351	897	1976	0	266
1956	0	661	1977	(32.8)*	
1957	213	710	1978	0	
1958	0	718	1979	0	
1959	0	745	1980	0	
1960	0	787	1981	(322.7)	405
1961	117	1006	1982	(165)	
1962	83	1006	1983	(140.1)	
1963	7	756	1984	(632.8)	
1964	48	1089	1985	(346.7)	
1965	0	-	1986	(641.1)	466

* Figures in parentheses are combined totals for Manihiki and Penrhyn.

SOURCES: C.I. Annual Report 1945-1964 in Appendix to the
 JHR of New Zealand

C.I. Census (1986)

Sims (1988a)

Underhill (1989).

The majority were from the neighbouring island of Penrhyn, whose population decreased by 216 from 1950 to 1951 (C.I. Annual Report, 1951, 1952). The boom period ended in 1956 when the Resident Agent on Manihiki closed the lagoon due to the low quality of shell being harvested.⁵

Also in 1956, research began on Manihiki into various aspects of pearl-shell growth. A transfer of young shell was carried out from Manihiki to Pukapuka and Rakahanga, whose lagoons did not have shells growing in them at that time (Powell, 1957). Growth experiments involving suspension from lines and various methods for collecting spat were also attempted. While this work was treated with suspicion by some Manihikians, due to their lack of exposure to the methods being employed, it did lead to some major recommendations (Powell, 1960, p-1). The most significant were the advocacy of periodic lagoon closures and of up-grading the minimum harvestable size to 5 inches.

Very little changed on Manihiki with the arrival of self-government in 1965. The Resident Agent and the Island Council continued to administer periodic closures of the lagoon, which was opened only three times between 1965 and 1981 (Refer table four). The openings were sanctioned by the Ministry of Agriculture and Fisheries, which had exclusive control of the lagoon.

This exclusivity was demonstrated in the next significant phase of farming development on Manihiki. Peter Cummings, an Australian, approached central government about conducting experiments in the Manihiki lagoon to test the feasibility of pearl farming. He was

⁵ The standard of shell is determined by how much 'worm' is in evidence in the shell. It is not actually a worm but a burrowing sponge (*Polydora pacifica*). The sponge, measuring up to a centimetre in length, attaches itself to the outside of the shell and progressively works its way in. This disfigures the shell and makes it more susceptible to breaking when being cleaned.

initially granted a three year contract in 1973 with a right of review. When the contract came up for review, an automatic renewal was vetoed by the then Member of Parliament for Manihiki, George Ellis, and negotiations were entered into. The Island Council, through George as their representative, objected to making the contract an exclusive one. They were only marginally successful, however, obtaining a reduction from a sixty-year exclusive contract to a twenty-year one. The final contract, signed in late 1976, was for a twenty-year exclusive lease at \$5000 per annum plus a 10% annual increase with 3% of the gross returns to the Island Council (G. Ellis, pers. comm.).

TABLE 4
PERIODIC CLOSURES OF MANIHIKI LAGOON
TO PEARLSHELL DIVING SINCE 1945

Years Open	Years Closed
1945-55	1956-57
1957-58	1958-61
1961-63	1963-64
1964 (3 months)	1964-69
1969 (42 days)	1969-71
1974 (3 months)	1974-77
1977 (3 months)	1977-81
1981-	

Sources: Cook Islands Annual Report 1945-64 in
Appendix to the JHR of New Zealand
Sims (1988b)
Manihiki Island Council Minutes
Underhill (1989).

Peter Cummings farmed around 50,000 shells at his peak and employed up to twenty locals. Things went well initially, but unsubstantiated rumours that Cummings was siphoning cash out of the farm led to disputes with the Island Council. Relations soured, and the contract was terminated in 1983 under pressure from the new M.P., Ben Toma.

The end result of the Peter Cummings affair was a re-focussing on the issue of lagoon rights. The total disenchantment of the Manihiki people with the granting of an exclusive farming licence by central government was strongly voiced. With the added stimulus of local interest in farming, the Pearl and Pearl Shell Act 1982 was a means to redress this grievance. Under this act, no person could:

- (a) seed, cultivate or otherwise cause to be grown
artificially any pearl, or
 - (b) seed, cultivate, propagate or transplant any
pearl shell, or
 - (c) gather, harvest or collect any pearl or pearl
shell
- in or from the lagoon unless a permit from the
Island Council has first been obtained.

(Pearl and Pearl Shell Act,
Section Three, 1982).

A right of appeal to the Minister of Agriculture and Fisheries was the only option if a permit was refused. Thus by 1983 the Manihiki people, through the Island Council, had legislation to back up their traditional claim to control of the lagoon.

The next six years were to be turbulent ones in the development of the cultured-pearl industry on Manihiki. The period was marked by

intrigue, threats of violence, jealousy and, above all, political turmoil. It is best to focus on the two main protagonists in the political battle for control of the nascent industry: Central government through its representative, the Ministry of Marine Resources, and local government, expressed in the form of the Manihiki Island Council.

1984-1989

Marine Resources

Marine Resources was created as a separate department to Agriculture in 1984. The Ministry of Marine Resources Act, 1984, stated one of the principal objectives of the new department was:

To seek and promote a rational approach to the development, exploitation, management and conservation of all living and non-living resources that are found in waters under Cook Islands' jurisdiction and to exploit such resources in a manner that will ensure maximum benefits accruing to the people of the Cook Islands.

(Ministry of Marine Resources
Act, 1984, Section 4a).

With the potential of pearl farming firmly established, the development of a cultured-pearl industry was one of the priorities for the new department. The emphasis was to be on maximum local participation. Offers from overseas were considered secondary, as shown by the following response to one such proposal by the Minister of Marine Resources:

In Penrhyn and Manihiki the people wish to carry out their farming themselves and do not want other outside companies to be involved at this early stage.

(M.R. File 1.2.3. 10.1.85)

Development of the new industry was intended for all the islands in the Northern Group. Consequently, Marine Resources conducted several reviews during 1986 as well as planning its first seeding operation. One review proposed a draft management plan which gave Island Councils a role in "supervision input and implementation of the management plan" (M.R. File 1.2.3). A further review in October 1986 also attempted to "formalize policies and priorities for the development of the perliculture industry" (ibid.).

Despite these reviews, practical matters were outpacing administrative attempts to manage the development of the industry. Farmers in Manihiki were expressing interest in seeding, and Yves, having by-passed Marine Resources, had established contact with the Manihiki Island Council.

Funding by aid agencies for a consultant and a technician was arranged by April 1987, and the seeding was carried out in October of that year. April 1987 also saw the idea of a management plan being mooted again. In a report to the Prime Minister the Secretary for Marine Resources proposed that "Well defined management and development guidelines should be drawn up under which the industry must operate".(M.R. File 1.2.1)

The Pearl-Oyster Fisheries Management Plan was eventually drawn up in draft form in early 1988 (Ministry of Marine Resources, unpublished paper). It was revised in September of that year and, with a

Maori translation, arrived in Manihiki in October. It had not been ratified by Cabinet by August 1989, nor any of its proposals implemented.

Island Council

By 1986 local interest in farming on Manihiki was building. Three divers had begun to drill and hang shell from platforms. Spat collection was also being attempted by five people, albeit on a small scale.

Interest from pearl farmers in French Polynesia was also being expressed. Their industry was plagued by disease problems and some hoped to expand into the Cook Islands. Two offers were rejected before the one by Yves Tchen-Pan was accepted.

Yves first visited Manihiki in May 1986, when a preliminary agreement was reached with the Island Council. He returned in December of that year, and a draft permit was presented to the Island Council (M.R. File 1.2.2). Yves' approach was via the M.P. Ben Toma who acted as the Island Council representative. The acceptance of Yves' proposal was aided by the fact that his lawyer was also acting for the Island Council.

The first of the disputes which would characterise the development of the industry occurred in June of the following year. After the acceptance of the draft permit, the Chairman of the Island Council was due to go to Rarotonga to finalise the terms of the contract. At a public meeting prior to his departure, a motion was put and carried that the Chairman should not sign the permit in Rarotonga but return to Manihiki for further discussions with the people prior to signing (Island Council Minutes, March 1987). This he did not do, however, and the permit was signed on 18 June 1987 in Rarotonga. It was presented to the people of Manihiki for discussion in April 1988.

While this was occurring, Marine Resources were developing their plans for a seeding for local farmers on Manihiki. These plans came to fruition in October 1987, when eight farms had shells seeded. The seeding

was carried out in the face of criticism from the Island Council. Under section three of the Pearl and Pearl-Shell Act, Marine Resources were obliged to obtain a permit from the Island Council for the technician who carried out the seeding. This they did not do, nor did they officially advise the Island Council of the intended seeding operations. Despite this, conceding to pressure from the farmers participating in the seeding, the Island Council did not halt the seeding, but ill will between the two parties was increasing.

The technical success of the seeding encouraged the local farmers and Marine Resources to attempt another seeding in April of 1988. Again, no application was made to the Island Council for a permit to carry out the operations. This was largely irrelevant, however, as the Island Council, acting through their M.P., brought pressure to bear on Marine Resources to halt the seeding. Amidst threats of violence,⁶ unfulfilled promises⁷ and claims of political intrigue,⁸ the seeding was halted. Intervention at the highest level by Prime Minister Pūpukē Robati failed to resolve the disputes. The closest the technicians got to Manihiki was to fly to Rakahanga to seed a farm for the Rakahanga Island Council.

As part of an attempt to bring some order to the burgeoning number of farmers,⁹ the Island Council reviewed the permit format in April 1988. Every intending and current farmer had to re-apply. When no permits were issued, one farmer, Tekake Williams, exercised his appeal rights to the Minister.

⁶ Threats that lines would be cut and farms destroyed if the technicians arrived were made to the participating local farmers.

⁷ Promises of assistance, which never eventuated, were made to the participating farmers by the M.P. and the Solicitor General at several meetings on Manihiki.

⁸ Some farmers claimed that Yves was pressuring the Island Council into stopping the seeding.

⁹ From the 8 farms seeded in October 1987 there were 15 ready by April 1988 and 28 eventually seeded, in November 1988.

What was at stake was the question of permits for technicians. The Island Council stated that the only technicians who would receive permits were those working for Yves. This was in effect a monopoly, with local farmers having to pay Yves for a seeding operation or not seed at all.

In a drawn-out, well-publicised battle, Tekake was eventually granted a permit by Terepai Moate, acting Minister of Marine Resources, on 7th October 1988. The Island Council interpreted the decision as a breach of their rights, and saw central government as favouring one individual farmer over others. The Island Council, utilising Yves' technicians, carried out a seeding in November 1988 for local farmers. Every farmer that seeded was issued a permit.

Employing his permit, Tekake was able to bypass the Island Council ruling on technicians and carry out a seeding in April 1989. These technicians also carried out the harvest for the eight farms seeded in October 1987.

Political Effects

The struggle between central and local government for control of the pearl culture industry on Manihiki reflects the structural contradiction inherent in any dual-level political system. Marine Resources are a government department concerned with a national perspective of the industry. They act according to what they perceive is beneficial for the country. Hence the Management Plan is an attempt to set the pattern for development of the pearl culture industry on a national scale involving several islands. Under the plan, overall responsibility for the industry would be under Marine Resources with the day to day management left to the Island Councils.

The Manihiki Island Council on the other hand are a local body concerned with community problems. Their view of the development of pearl farming is limited to the industry on Manihiki which is part of the development of Manihiki as a whole. In this sense farming is linked to and based on community involvement. This is expressed in clause 17 of the Pearl-Shell Farming Permit issued by the Island Council which states:

The continuation of this permit depends on the resource and the effective participation of the Holder in community activities and public works directed by the Island Council at the discretion of the Island Council.

The two distinct views on development can be seen in the emphasis that has occurred as to who should farm. Marine Resources has encouraged development of privately owned and worked farms with each working to their individual maximum potential. The Island Council however, prefers to see family plots in a communal farming area of the lagoon, with numbers restricted.

The contrasting views can also be seen in the involvement of Yves Tchen-Pan. The Island Council entered into an agreement with Yves according to what they perceived would be advantageous for Manihiki. The emphasis for Marine Resources instead, was on maximum local participation utilising outside technical assistance and expertise on short-term contracts. Farms however were to be owned and operated only by Cook Islanders.

The ability of the Island Council to offer and sustain a competing view of development was assisted in this case by the legislation, (the Pearl and Pearl-Shell Act), and by the inexperience of the newly created Marine Resources Department. What also needs to be considered is the peripheral location of Manihiki with regard to Rarotonga. Manihiki's geographical

isolation and poor communication links with Rarotonga have encouraged the retention of independent habits. Decisions made in Rarotonga may take two to three days to communicate to Manihiki, if the radio link is not functioning clearly. The alternative is by mail on the infrequent shipping service.

As public servants on Manihiki tend to act with little input from Rarotonga, often what will be more important than enforcement of a directive is the retention of one's status or position in the community. The isolation can be functional therefore, in cases where bureaucratic decisions may have negative ramifications for Manihiki, and are consequently never applied or only partially enforced. With regard to the control of the lagoon this bureaucratic distance has led to conflict. While central government may have taken official control over all the sea area of the lagoon, this has never been accepted or recognised by the Manihiki people.

An interesting result of the conflict between the Island Council and the Government, over the lagoon, has been the re-assertion of traditional family holdings to areas of the lagoon. Since the abrogation of these family rights at the turn of the century, legal control of the lagoon has been with central government. The Island Council however, has been seen as the care-takers of traditional family rights, due to their daily involvement in the management and administration of the lagoon. However, when the Island Council was perceived as no longer being representative of certain families' views, the family access rights were re-asserted.

The focus of the re-assertion of traditional holdings was the islands within the lagoon. As the number of farms increased, people were laying claim to islands for use as work-stations near to their farms. These islands are included in the *rahui* administered by the Island Council. Farmers

justified their "land-grab" by stating that they had a traditional access right through family links, which pre-dated Island Council and central government intrusions. Genealogies and maps of family holdings have been produced to support claims.

The dispute between the two political bodies has meant a lack of direction and planning for the industry, and new farmers have been left to go their own way. A rush for the prime farming sites adjacent to the villages, as well as for the islands, has meant scattered farms of various sizes with poorly defined boundaries.

How the Island Council or central government will deal with the re-emergence of traditional claims remains to be seen. If allowed to stand, these claims would end what little Island Council or government control exists over the administration of the developing industry.

Has the development of the pearl culture industry altered Manihiki's relationship with Rarotonga? If so, is Manihiki more or less dependent as a result? We can begin to answer these questions by looking at the impact of the 1982 Pearl and Pearl-Shell Act. This legislation has prevented Marine Resources from controlling the development of the industry. The Act gave legal sanction to a traditional belief that Manihikians controlled their lagoon. The Island Council, seen as the caretakers of this traditional right, therefore had the ability to by-pass central government and deal directly with outside individuals such as Yves Tchen-Pan.

The Act in effect reversed the power relationship, with regard to the industry, between the centre and the periphery. Before Marine Resources or any outside body, can do any work in the lagoon with regard to the mother-of-pearl shell or pearl culture, they must have the permission of the Island Council. The isolation of Manihiki, and the small

population, mean that enforcement of this Act by the Island Council is very simple.

The economic dependence on Rarotonga has also been altered by the revenue gained from the Island Council Trust Farm. When Peter Cummings left Manihiki the Island Council bought his stock which included some 10,000 oysters. As part of the contract with Yves these oysters were seeded in 1987 and harvested in May 1989. The returns have pushed Manihiki ahead of any other Island Council in the Cook Islands in terms of revenue.¹⁰ How the money, approximately \$280,000, will be spent has yet to be decided but the resultant economic impact will be significant.

To balance out the effects described above is the ongoing dependence of Manihiki on Rarotonga for all its trade goods, building materials, fuel, and communication and transportation networks. A significant percentage of its income remains through government wages. The dependence in these areas is likely to increase as the pearl industry develops. Rarotonga will become the major market-place for buyers to view pearls, as well as the holding site for exportation to other countries.

Once the cultured-pearl industry spreads to other islands in the Northern Group,¹¹ increased contact with Rarotonga will occur. Proposals for a regular air-service plus government purchase of a ship to supply the Northern Group will mean a 'drawing in' of these outliers. Increased contact is likely to result in a greater administrative presence on Manihiki through government departments such as Marine Resources, Inland Revenue, Health and Education.

¹⁰ \$280,000 was the quoted return to the Island Council which, at the time of writing, was invested in a term deposit in Rarotonga until discussions could be made as to its allocation.

¹¹ Penrhyn and Suvarrow are the most likely sites for pearl cultivation. Transfers to Pukapuka and Rakahanga are also planned.

CHAPTER FIVE: SOCIAL IMPACT

Introduction

While this study has been conducted at a time when pearl farming is still in its initial development on Manihiki, the industry has already affected social change. At the family level, these will be illustrated by the following case studies of three farmers involved in the first seeding and harvest. Of the seven families that seeded in 1987, these three were selected as case studies as they represented the variation in the process of change that is occurring as families and individuals begin farming. Discussion of the changes will be at a general level using the case studies for specific references.

The perceived economic viability of life on Manihiki by Manihikians living away from their island, may also be changing. Two case studies of recent migrants will be discussed to discover the extent to which the development of pearl farming may influence migration patterns.

Case Studies of Farmers.

Case Study One

Metuakore, 52, was born and grew up on Manihiki. After he left the local missionary-run school during Grade Six he joined the Public Works Department in Tauhunu. In 1953 he went to Rarotonga on an apprenticeship, returning briefly in 1955, before going back to Rarotonga and on to New Zealand in 1958 to continue his carpentry education.

In New Zealand Metuakore worked for a Fletcher's subsidiary prior to joining the army for two years as part of National Conscription.

After coming out Metuakore eventually gained his New Zealand Trade Certificate in joinery in 1970. Despite this qualification his carpentry work was not advancing him in the workforce and he became disenchanted with life in New Zealand. News from Manihiki of land disputes plus an ill, elderly father combined to make Metuakore decide to return to Manihiki in 1977.

On his return Metuakore's income initially was only from making copra. Closure of the lagoon to pearl-shell diving for conservation reasons meant that, apart from a government job, copra was the only other method of income for Manihikians.

The lagoon was re-opened in 1981, and Metuakore began working on a diving machine. These machines consisted of a pump on the surface connected by a long hose to the diver working below. The divers on machines were not allowed to work above 15 fathoms (27 metres) but often worked down to 25 fathoms (45 metres).

In 1982 Metuakore began free diving for himself. In late 1982 he was given the job of policeman for Tauhunu and he was able to combine this with his shell-diving. He also applied for and received a loan from the Cook Islands Development Bank (C.I.D.B.) to build a house. The loan was paid off mainly through copra sales, as part of the house was a kiln for drying the coconuts.

Metuakore's major income during the early 1980's was from copra, but with the collapse of the copra market and increasingly higher prices for pearl-shell, by 1986 he was no longer making copra.

In 1985 Metuakore was offered the job as agent for a Rarotonga shell-buyer, for which he was paid on a commission basis. Metuakore graded and bought shell using the buyer's money and then packaged and shipped it to Rarotonga. At that time he was the only buyer located in the village, as other buyers came up and returned on each boat.

After the departure of Peter Cummings and following the example of Tekake Williams, 1985 was also the year that Metuakore set his first spat collector. Tekake had been introduced to the idea of collecting spat as one of Ron Powell's divers in 1958, and following the departure of Peter Cummings, had set some lines and begun to drill shell.

Metuakore began farming by himself as part of a work co-operative. The co-operative consisted of three adjacent farms owned individually and with each farmer bearing his own costs. However certain jobs, such as setting lines, required many hands and were done by all three farms.

Metuakore realised though the need for involvement of other family members in the farm if it was to progress. Accordingly, in mid-1987 he sent a letter to his brother in Auckland enquiring if Metuakore's nephews were interested in coming to Manihiki to help on the farm. Two of them duly arrived in January 1988, but one returned to Auckland after two months.(Refer Migrants Case Study One).

Metuakore resigned from the Police Force in July 1987 because he wanted to devote more time to his agency and diving. He was part of the initial seeding arranged by Marine Resources in October 1987 having 500 shells seeded.

The arrival of Metuakore's nephew Harry, his wife Vaine and two children has meant an end to Metuakore's bachelor lifestyle. Prior to that, he was living with his brother and doing his own cooking and washing. An average of three to four days a week were spent diving. Fishing times were combined with this and were not separated. "Sometimes on our way back, we would stop at the pa, or if we saw a fish while diving, we would spear it." 'We' in this case was whoever Metuakore had gone diving with that day. At this time he also had his shell-buying and his police work.

With the presence of Harry and Vaine and the development of the farm, now numbering 2,000 shells, Metuakore's work shedule has been substantially altered. Nowadays he will spend three to four days a week on farming, but this can vary according to the season, lagoon conditions and seeding times. Harry now does most of their fishing, which has become separated as a task in order to meet the needs of a young family. Vaine looks after their home and does the majority of the cooking and cleaning. All three work on the farm but Vaine's input is restricted to land-based jobs such as drilling, cleaning and stringing shell.

In May 1988 Metuakore was appointed as night-watchman for the Government buildings. He also still buys shell which Harry assists him with, and when they have time they both go diving for shell.

With the return from his first harvest in May 1989 Metuakore's first outgoing was to pay off his *kaiou* (credit) at a local shop.¹ He had been extended extra credit on the basis of the harvest, as were the other farmers. Metuakore's *kaiou* was slightly higher though as it reflected the high percentage of his diet which was store-bought as opposed to local food.² Metuakore's estimate was that 75% of his diet was store-bought, which percentage he felt hadn't changed much over the past few years.

Part of Metuakore's harvest money was donated to the local C.I.C.C. which he regularly attends. Metuakore and three of the other families that harvested each gave \$100 to the church. The remainder of his harvest was spent on some farming materials from the Marine Resources shop, and an order of cement and timber from Rarotonga to rebuild his house. In February 1987, Metuakore's house was damaged by a cyclone, so Metuakore and Harry's family had been occupying a vacant

¹ Metuakore's return from the harvest was \$3200 NZ.

² Local food refers to the types of food which grow, or are easily available on Manihiki e.g., seafood, coconuts, breadfruit.

house belonging to one of Metuakore's cousins. After the arrival of the cement, they were able to repair the house and shift back in.

Metuakore's house is made of concrete blocks and has an aluminium roof although he has no water tank to catch the run-off. He has no toilet, like the majority of homes in the village, and uses the public toilets out over the lagoon. Their cooking is still done outside over an open fire and a small kerosene primus. Washing is done by hand and is also outside.

The arrival of Harry and Vaine and their young children, a daughter aged 12 and a son aged 7, has led to more English being spoken in their home. All three adults are fluent in Maori and English, but Metuakore felt that for the benefit of the children they should speak in English. The children however were learning Maori quickly through interaction with other children and it was questionable how long this situation would remain.

As to the future, Metuakore recognised the need to work together as a family and as a community to develop farming. "If we don't give up, we'll get what we want." To Metuakore, the development of farming was for "the kids", the kids in this case being Harry 33, and Vaine 32, as well as their children, and including family still in New Zealand. The flow-on effect for Manihiki, Metuakore said, was to draw them, (family in New Zealand), back to Manihiki for their land.

Case Study Two

Tangiia, 51, lives out of the village on a piece of land belonging to his wife Valerie. Their house, which Tangiia built in 1984, is made from a combination of concrete block and fibrolite, with timber from Rarotonga. They have a corrugated iron roof and two water tanks, so do not need to carry water from the village. They have an outside toilet and bathroom as well as an outside kitchen where the cooking is done over an

open fire. The inside consists of three large rooms, one of which is a dining room.

Staying with Tangiia at present are two sons, a daughter-in-law and four grandchildren. He and Valerie have three other daughters who live in the village. Two of their daughters are wage-workers employed by Yves, so they often bring their children down for the day while they are at work.

Tangiia is originally from Rarotonga. His mother was of Rarotongan descent and his father was from Mangaia. As a result he has no entitlement to land on Manihiki apart from that belonging to Valerie's family. Tangiia attended school until Grade Five when he left to work on the family plantation. When he was 19 he joined one of the ships trading out of Rarotonga as a third engineer. He arrived in Manihiki in 1957 and was convinced by a Manihikian friend that he could earn more money diving than from working on the boat. Tangiia moved in with his friend and after the lagoon closed (refer table four) worked building a house for his friend.

During the early 1960s, Tangiia began working on a diving machine, first as a mechanic on the boat, and later as a diver. With the machine he moved around the Northern Group diving in Penrhyn and Suvarrow before returning to Manihiki to marry and settle down.

From 1964 through to 1976 the Manihiki lagoon was only open to diving twice; once in 1969 and again in 1974. Both times, however, were for a three-month period. As a result Tangiia's main income was from copra, with the money from diving, when the lagoon was open, as a bonus.

In 1976 he began working for the Public Works Department, being put in charge of the Government machines and workshop in

Tauhunu. He held this job until 1983, when he resigned after conflicts with the local administration.

With the lagoon now continuously open and the price of shell at \$1.40 a pound, shell-diving became Tangiia's main income once again. His family still made copra, but only on a limited basis.

Tangiia's first practical involvement as a farmer was when he set a spat collector in 1985. He had been encouraged by the example of Tekake Williams, who was the first local person to try spat collection. At this time, however, shell-diving was still Tangiia's main occupation. On average, two to three days a week were spent diving and one day in the week would be used to check lines or platforms. At this initial stage, farm work was minimal and was carried out by Tangiia and his eldest son, Bernie.

As no work is allowed on the Sabbath, Saturday was always spent fishing in preparation for Sunday, and an *umu* would be put down on Saturday night. Fishing was not restricted to Saturday, however, and would be done at various times during the week. Tangiia stated that whenever he wanted fresh fish he would go fishing, sometimes for the whole day.

1987 was a transitional period for Tangiia which saw him change from a diver who farmed in his spare time to a farmer who dived in his spare time.

Following the seeding in October 1987, when Tangiia's family had 500 shells seeded, the transition continued. Tangiia now terms himself a "full-time farmer", spending three or four days a week working on the farm. He no longer dives for shell regularly but still spends the same amount of time fishing. These activities are normally carried out with Bernie and Tangiia's youngest son, Neil. At present he is also constructing

a *fare pora* (thatch roofed house), by the lagoon opposite his home, for Bernie and his wife Nancy.

As with most other women, Valerie and Nancy's involvement with farming is land-based. For occasions when non-family members are involved in the work, they prepare a *kai-kai*. This will be done while the men are on the water. If there is drilling to be done, or cleaning and stringing, and the *kai-kai* is ready or not necessary, then they will assist.

Valerie's daughters, two of whom are living with husbands, rarely join in the day-to-day work on the farm. Two are employed by Yves and the other works on the farm of the house she resides in. This daughter lives with her sister and sister's husband. While the sister goes to work for Yves, she works on her brother-in-laws farm.

Tangiia views the farm as a "family farm". Family, in this case he defines as those who participate in the work done on the farm. He does not regard relatives in Rarotonga or overseas as having a share in the proceeds. Nor does he include his daughters who are resident outside of his household, but still on Manihiki.

Kin not resident on Manihiki have had no input into the development of the farm. Tangiia has never received remittance money from kin overseas nor has he ever requested it. He has, however, sent money if he had it when family asked, or on the odd occasion his children have gone to Rarotonga.

With the return from his first harvest, of approximately five and a half thousand dollars, Tangiia used the majority of it to pay off his family's *kaiou* at a local store. During 1988, while concentrating on farming, Tangiia built up over \$3,000 worth of *kaiou*.³ He paid some off by selling shell to Yves and to other local farmers who, in order to boost

³Another \$2000 was given to Bernie to clear his account at the same shop.

shell numbers for seeding, were buying shells. The balance was cleared after the harvest. The harvest money was also used to buy his petrol and farming materials in sufficient quantity to last him for a year.

The huge build-up of credit, by Tangiia's standards, is a recent phenomenon. He used to order his goods directly from Rarotonga from a cousin who owned a shop. These were only staples, however, such as flour, sugar, rice, cornbeef and cabin bread. He stopped ordering direct when some of his cargo went missing en route but he still had to pay for it.

With the establishment of a shop on the island which has a wide variety of products in sufficient quantities, Tangiia's family now purchase all their goods on the island. Tangiia felt that, because of this, they were now consuming more *papaa* food than before.

One of the major factors in life on Manihiki is the Church. All of Tangiia's family are members of the Cook Island Christian Church (C.I.C.C.), although only Valerie and the grandchildren regularly attend. Tangiia always participates in Church-organized working bees, however, and a donation of money from the harvest was given to the Church.

While Tangiia is able to converse in English, he is not fluent and prefers to speak Maori. Valerie does not speak English, and Maori is the language they use at home.

For the future, Tangiia would like to build his farm up to about 3,000 shells. This would give him some time to do other things. One day he would like to build a sailing boat just for sailing, along the lines of "the old boats" they used to employ to cross the lagoon prior to the arrival of outboard motors.

Case Study Three

Kereni, 20, was the youngest of the first group of farmers that seeded in 1987. Unlike the others, the seeding was Kereni's first foray

into farming. He had set no spat collectors nor built any platforms up to the time of the seeding. Then 18, he had been diving for only three years.

Kereni was born in Tauhunu and attended primary school there before moving to Rarotonga for his last two years at school. He returned to Manihiki without entering secondary school and began diving.

Kereni lives with his parents and girlfriend, Teresa, about 3 km out of Tauhunu on the lagoon side of the island. Kereni's brothers are sometimes at home but often stay in the village with relatives. The home is on Kereni's father's land although Kereni's mother is also of Manihikian descent.

Their house consists of a large single room with *kirikiri* (small beach stones) on the floor. They have no electricity and use benzene lanterns for lighting. Most of the cooking is done outside over an open fire, but they have a kerosene burner as well. An *umu* will be put down every Saturday in preparation for Sunday and at other times as needed, e.g., visitors, community *kai-kai*.

As their house is constructed from local timber with a *pora* roof, the catching of water is not feasible. They have a small lean-to shed beside the house, which has iron roofing on top and serves as their water catchment. In extended periods of little or no rain, they will fetch water from the public tanks in the village.

Bathroom facilities consist of a square, roofless booth with *pora* walls where they can wash. Their toilet is built out over the lagoon at the end of a causeway.

Maori is the dominant language in their family. Kereni's English is good, while Teresa is fluent in both Maori and English. Neither of Kereni's parents speaks English very well. All of the family are members of the Cook Islands Christian Church, and Kereni is in the Boys Brigade

band which plays in the church parade on every second Sunday of the month.

Kereni owns a motorbike, which is their only private means of transport on land. For diving he has his own aluminium boat and 25-horse-power engine. Sometimes for working on the farm, Kereni will use a larger wooden boat built by his father but which Kereni's brother-in-law was using at that time to go diving.

In 1987 Kereni had very little of the infrastructure to begin farming, but he was able to prepare quickly and participate in the seeding because he had a large number of banked shell available. Kereni's only income at that time was from diving, as it had been since he returned to Manihiki from school. He has never made copra on a sustained basis, but only on odd occasions to assist family members. Part of Kereni's income was, and still is, given to his parents to help with household bills. Other income for his family comes from Chris, Kereni's father, who is employed by the Public Works Department as a builder.

In the initial stages of the farm, Chris contributed to the purchase of materials. Since then, however, Kereni alone has financed the development of the farm with no monetary contributions from family overseas. Kereni wrote to his brothers and sisters to see if any were interested in returning to begin on a family farm, but none were.

Work on the farm is done mainly by Kereni himself, or with his younger brother if he needs him. For larger jobs Kereni's parents and girlfriend will assist, but Kereni rarely goes beyond them for assistance.

Kereni was of the opinion that the advent of farming had not changed his work schedule much. Although he might spend two days per week on the farm, he still goes diving and fishing and has time for sports at the local club. He is also currently building his house (out of concrete blocks) in the village.

As diving is Kereni's only other source of income he still spends more days diving than farming, although his diving time now is less than before he began farming. Also impinging on it is the construction of his house.

All of Kereni's *papaa* food is bought locally as he does not order foodstuffs from Rarotonga. He does not carry a large amount of *kaiou*, however, and his family's main meals are based on fish. Kereni felt that this had not been affected by farming.

What had changed for Kereni was that all his spare cash was now going towards financing the house. Previously he had used it to buy other things such as a motorbike or an engine for the boat, which were shorter term desires. With the house, he is planning for the future.

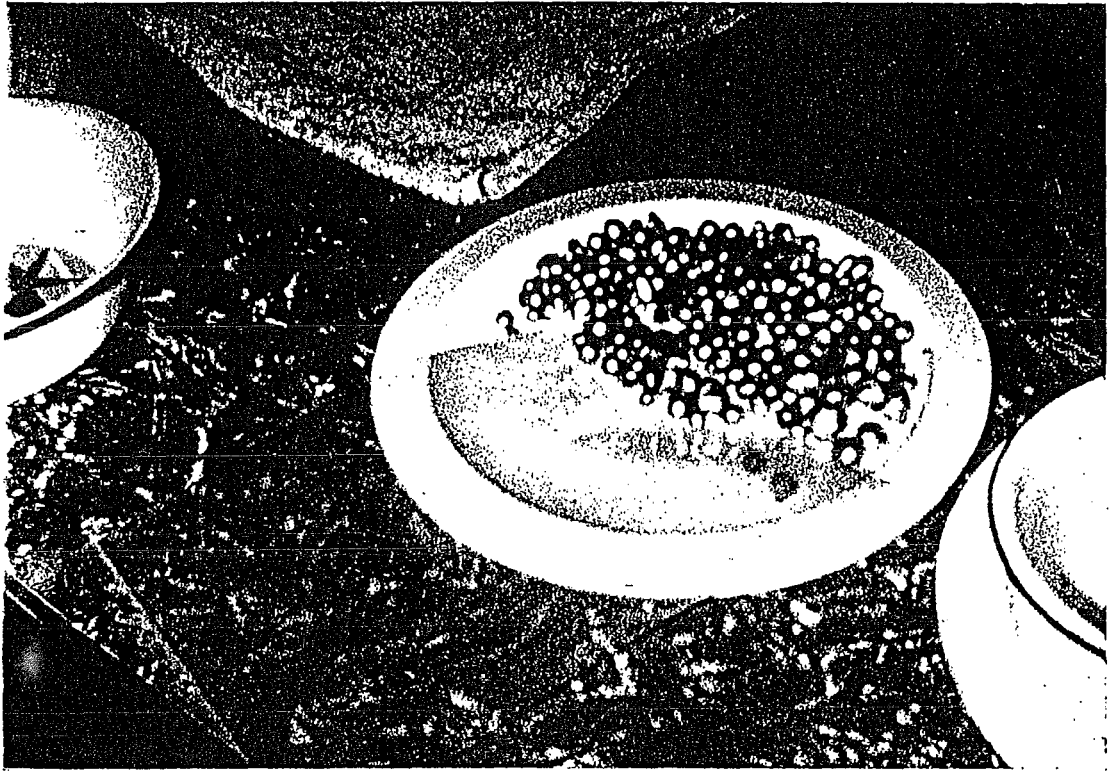
Kereni's commitment to farming is perhaps reflected in the low return from his first harvest of just over \$1000. The money was not used for any specific purpose although some farming materials were bought with it. Kereni's *kaiou* was minimal and he made no contribution to the church.

Kereni's farm numbers around 1500 shells at present. In the future he would like "... just a small farm so I can go diving", perhaps 5,000 shells.

Social Changes

Adoption of Farming

As the case studies indicate, some families are more inclined to commit themselves to farming than others. Factors such as age (see labour allocation) and location are important and should be considered when looking at the acceptance of new technology. The eight farms that first



Top: One family's cultured-pearls from the harvest in April

Left: The Japanese technician employed to conduct the harvest, carrying out a preliminary grading

seeded in October 1987 were all located in Tauhunu. They were thus closer to the pre-seeding developments and organisation being carried out. The example of Tekake Williams as a model cannot be overlooked, and farmers in Tauhunu were better able to observe his methods.

Of the seven families (the other farm was the Catholic Mission's), five had already made the preliminary step towards farming by setting spat-collectors. Initially, this was done simply to gather the shell for harvesting, but once the opportunity to seed for pearls was offered, these families were better placed and more disposed towards accepting the chance.

Once the initial breakthrough was made, the example of these families and of Yves encouraged increased participation. Very few families, however, have committed themselves fully to farming. Most prefer to combine it with other occupations and methods of earning an income, e.g., diving, government wage. With the exception of one farmer, the numbers of shells seeded on each farm do not exceed three or four thousand.

By beginning farming, alterations have had to be made in various aspects of family life on Manihiki. I will discuss this effect by focussing on changes in the kinship structure, the allocation of labour and the income of the families described in the case studies.

Kinship Structure

The organisation of labour to meet the demands of pearl farming has not altered significantly: the family remains as the economic unit of production. Family members work their own farms and any returns are shared out amongst themselves. Families continue to engage in reciprocal exchange of labour for large jobs, such as laying lines. Groups of farmers with contiguous farms often work together, but propinquity is not the only factor, as kin and friends will also assist. Contributions are not even restricted to members resident on Manihiki: relatives in Rarotonga or

New Zealand may be asked to contribute money, materials or labour (as in Harry's case). Only contributing members of the kinship unit will derive any benefits, as shown by Tangiia's exclusion of his daughters who reside on Manihiki but who do not assist him.

Division of labour along gender lines is seen within the kinship unit when carrying out farm work. It is a continuation of the roles assigned to diving for the mother-of-pearl shell, where the women's work is essentially land-based. The men do all the diving, setting of lines and placement of platforms. Women assist with drilling, cleaning and stringing shells. Their main responsibility, however, is the preparation of meals to feed those who assist in the work, and this takes precedence over the tasks mentioned above. A woman may be asked to assist on the water if there are not enough men, but in these cases she will stay in the boat to help with handling of materials.

Labour Allocation

The organisational implications of commercialisation in a capitalist society, such as maintenance schedules, deadlines, and labour productivity, have occurred only in an ad-hoc manner with regard to the development of the pearl industry. The small scale of most farms, numbering two to three thousand shells, has meant that the organization of time to meet the demands of farming still remains informal.

Whilst most Manihikians have some experience of working under wage conditions, the jobs carried out are not strictly time-controlled. As described in the Introduction, government servants can often combine their jobs with other occupations due to the lack of enforcement from Rarotonga of employment conditions. This bureaucratic distance has helped maintain a cognitive view of work which Finney has described among Tahitians as "task-oriented" rather than "time-oriented" (Finney,

1988, p-198). More important than the time taken to do a job is the actual completion of the task.

When trying to ascertain how much time farmers committed to farming, they would reply with an approximation, e.g., 2-3 days. This reflected the influence of environmental conditions as well as their attitudes to work. A farmer may work half the day to complete a task that on another day would require a whole day. Life is not controlled by the clock but by the completion of tasks necessary to the continued reproduction of economic and social life, e.g., farming, fishing, diving.

As farming develops, the commitment of individuals and families can be seen as a continuum between diving for the wild shell and farming on a large scale, i.e., 10-20,000 shells. For some, such as Metuakore and Tangiia, the change was gradual due to their long involvement in farming. Both had been regular divers but saw this slip away as their commitment to farming increased. Also important in their cases was their ages. Both were coming to the end of their most productive periods for diving and were willing to adopt an easier form of work, such as farming.

Of the farms involved in the first seeding, the person who began the farm was over 40 in seven out of the eight cases. Contrastingly the majority of the divers, mostly under 40, have been reluctant to switch to a farming oriented work programme. Most follow a programme similar to Kereni's, where diving remains the main occupation with some time spent on farming.

With the wild shell becoming harder to reach, being found mainly at depths over 30 metres, a return to copra production to sustain income levels would have been expected. The development of farming has restricted this at present. However, a recent rise in the price of copra to \$450 per tonne may change matters (Cook Islands News, 21.8.89, p.2).

Kaiou

As farmers move along the continuum from diver to farmer a restructuring in income is expected. Instead of weekly returns from diving, a farmer's income is delayed by eighteen months. A consequent build-up in *kaiou* would be expected and is shown in Tangiia's situation.

Tangiia's *kaiou* reached such a high figure because diving was his only income while he developed the farm, unlike Metuakore, who had a government job as well as his shell agency. Tangiia's diet did not change (i.e., his proportion of store-bought food), only his ability to pay for that part of his diet. Metuakore's situation was influenced by the arrival of Harry and Vaine with the resultant increase in consumption of store-bought products. Kereni's retention of diving as his main occupation meant a more regular income and consequently less *kaiou* at the store. Unlike Metuakore, he had no recent immigrants to feed.

While the development of the cultured-pearl industry does not appear to have affected a change in diet as yet, except in families with returning migrants, it has created the conditions that may lead to such a change. Trading stores now offer a greater variety of goods than in previous years, and they also offer increased credit facilities to stimulate return business. One shop in Tauhunu had cash sales for the period October 1988 to May 1989 of \$240,000. In the same period the amount placed on *kaiou* increased from \$40,268 to \$49,624 (Fieldnotes). The policy of the shopowner was based on the source of income of the customer. For a wage-worker he would allow a credit limit of only \$100. For divers the limit would be "in the \$100s" and for farmers, appreciably more.

The direct benefits to the trading stores is in the provision of food for farm work. When groups work together to put down lines, drill shells, etc., the food prepared to feed the workers includes a significant

percentage of store-bought products. While some shops also stock farming materials such as rope or wire, sales of these are minimal due to the Marine Resources Store in Tauhunu.

Remittances

The role of remittances in sustaining economic life on Pacific Islands is emphasised by researchers. This and other research indicate that in the Cook Islands the significance of remittance payments may be decreasing. Lewis found that on Atiu in the Southern Group, remittances constituted more than 20% of household incomes in only 7 out of 38 cases studied (1988, p-62). In each of the case studies above, the farmers indicated that they received no remittances. In fact, two of the three (Tangiia and Kereni), had recently sent money out of Manihiki to assist relatives in Rarotonga or New Zealand.

Remittance payments should not be considered as "one-way traffic". My analysis includes money sent from Manihiki, as well as to Manihiki. The difficulty lies in discovering whether the money sent from Manihiki is simply to support family or for purchases of goods to be sent to Manihiki (not essentially a remittance). As I have been unable to discern this, the discussion concentrates on the overall flow of money to and from individuals on Manihiki.

Remittance payments enter Manihiki by three methods:

- (1) As cash given to passengers returning to Manihiki to pass on;
- (2) as cash in letters to relatives through the mail,
- (3) as money-order telegrams.

Cash carried into Manihiki by individuals would be minimal. The boat service is irregular and turnover of the population is not high. There is also the reliability of individuals acting as the carrier to be considered. Cash in letters does not appear to be frequent, but there is no reliable method of estimating this except by survey. For most people, their only

TABLE 5TOTAL OVERSEAS AND INTERNAL MONEY ORDER TRANSACTIONS ON MANIHIKIM O PAID

	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
1987-88	2.375	5.165	7.984	3.313	2.370	51.870	6.032	8.079	3.400	6.180	6.595	4.086	107.269
1988-89	2.353	2.200	13.206	6.962	3.852	3.652	2.376	5.218	8.713	9.341	4.535	3.180	66.408

Value
(\$ NZ'000)

M O ISSUED

	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
1987-88	64.142	60.937	55.969	53.403	38.129	117.352	78.799	71.938	60.733	46.729	66.162	100.020	814.305
1988-89	55.440	82.220	60.940	26.742	89.324	57.206	103.340	88.917	45.785	50.655	129.017	67.145	856.731

TABLE 6MONEY ORDER TRANSACTIONS OVERSEASM O PAID

	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Total
1980	.883	.323	.310	.050	1.430	.405	.680	.280	.625	.730	.820	1.320	7.856
1988	1.000	1.970	2.480	.200	1.000	.300	.340	.150	.050	.858	.150	1.650	10.148

Value
(NZ'000)

M O ISSUED

	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Total
1980	2.921	.280	.460	.050	.305	.135	.720	.669	.659	.410	.800	.570	7.979
1988	4.390	2.820	1.860	22.601	.410	.544	4.030	1.150	3.895	3.315	2.365	2.830	50.210

TABLE 7
MONEY ORDER TRANSACTIONS WITHIN THE COOK ISLANDS

M O PAID

	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Total
1980	1.032	.320	16.279	17.194	17.470	7.508	.621	1.285	17.806	4.694	8.124	1.786	94.119
1988	2.400	4.210	4.115	3.886	2.353	1.900	12.686	6.812	3.801	2.814	2.226	3.568	50.771

Value
(\$NZ'000)

M O ISSUED

	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec	Total
1980	19.264	16.604	17.162	9.938	16.703	10.957	12.317	7.961	16.479	13.549	7.625	13.511	162.070
1988	56.343	43.901	64.302	77.419	55.030	81.676	56.910	25.592	85.429	91.889	100.975	86.087	825.553

method of receiving money is as a money-order telegram.⁴ The same applies for sending money out of Manihiki.

Tables 5, 6 and 7 show figures for money-order telegrams (M.O.T.) issued (outgoing) and paid (incoming) on Manihiki. The figures were taken and collated from the monthly balance of the Post Office in Tauhunu. These figures also include the transactions for Tukao Post Office as all M.O.T.s are sent and received from Tauhunu. The calendar years given are those for which the whole year's statements were available. Records for other years were incomplete, the files having been misplaced.

The most observable phenomenon of the introduction of pearl farming on payments is to introduce a seasonal effect. When Yves arrived in October 1987, he immediately began buying live shells at \$3 each to be seeded. Large numbers of banked shell held by various divers were sold, with the result that some families received a cash injection of \$10-20,000.

The two seeding seasons of October-November and March-April have continued to be the times that Yves purchases the shells. In Table 5 this is reflected in the figures for money remitted out of Manihiki (M.O. Issued). October 1987, April and November 1988 and March 1989 all have amounts of over \$100,000 sent from Manihiki via M.O.T.⁵ Table 6 and Table 7 support this. For overseas money-orders issued during 1988, the highest figure is for April, and for internal, November.

The money being sent from Manihiki is to businesses and family in Rarotonga, and to family in New Zealand. Money to family is generally to support them, but may also be to purchase goods to be sent to Manihiki.

⁴ For government departments and some businesses (shell buyers), Treasury vouchers are the method of transfer.

⁵ Yves initially used M.O.T. to transfer money to Manihiki, hence the high figure for October 1987. Subsequent transfers were by Treasury Voucher so do not affect these figures

In the case of money sent to New Zealand, the former is more likely, as purchased goods are usually from Rarotonga.

Evidence to support the decreased significance of remittance payments can be found in Tables 6 and 7. A comparison between 1980 - the last year the lagoon was closed - and 1988, would be expected to show an increase in the value remitted. Accordingly, there is a small rise of \$2,292 in the value of money-orders from overseas. This figure is dwarfed by an increase of \$42,231 in the value of money-orders issued for the corresponding period (refer Table 6).

The picture for within the Cook Islands also indicates a decreased significance of remittances. The value of money-orders paid decreased by \$43,348 from 1980 to 1988. On the other hand, the value of money-orders issued increased by \$663,483, an increase of over 500% (refer Table 7).

Migrants

The potential of the development of pearl farming on Manihiki to attract Manihikians back to their *enua ipukarea* (ancestral homeland) appears to be beyond question. What needs to be discerned is to what extent the attraction influences the decision to move? What are the other contributing factors. During the fieldwork, data was collected on seven recent immigrants who, including family members, represented an influx of eighteen people. These two case studies were selected as they are considered representative of the broad range of characteristics exhibited by the recent migrants.

Case Study Four

Harry 34, and Vaine 32, first heard about the development of pearl farming in Manihiki when they received a request from Harry's

uncle Metuakore to return and assist him on his farm (refer case study one). With the worsening employment situation in New Zealand, they had been considering returning to the Cook Islands, although their focus was on Rarotonga or Aitutaki, where both have entitlement to land. They both also thought that there was more opportunity for economic gain in the Southern Group. The request from Metuakore persuaded them to come to Manihiki instead.

Harry was born on Rarotonga. His father is of Manihikian descent, while his mother was from Aitutaki. At the age of seven Harry was taken to New Zealand to attend school. He left secondary school during the sixth form and joined the workforce. He met and married Vaine in Auckland, and they bought a house in Manurewa.

Vaine was born in Rarotonga and attended secondary school on the island before moving to Auckland. The original intention to move to Rarotonga was because of pressure from Vaine's father for them to build on her land there.

In 1985 Harry was made redundant from his job of eight years packaging in a tea factory. Over the next two years he had three other jobs, from each of which he was made redundant.

After making the decision in late 1987 to move to Manihiki, they sold their house and possessions, gave their dog to Harry's father, and emigrated. With them came their daughter aged twelve, an-eight-year old son, Harry's brother Gary, and a few personal items. The money from the sale of the house was invested in New Zealand.

When they arrived in January 1988, Harry's family stayed at a relative's vacant house with his uncle Metuakore. They were there for over a year before the re-construction of Metuakore's house was completed. Initially, both found it hard to adjust to life on Manihiki. It was the first time for both on an island in the Northern Group, and the

isolation was difficult. Harry and Vaine are both fluent in Maori and English, and this assisted them. Despite that, Harry said that people still derided him when he mispronounced or didn't know a Manihiki word as opposed to a Rarotongan word.⁶

The adjustment to living on Manihiki was made easier by the presence of Metuakore. He taught them both the basic skills necessary for life on Manihiki and enabled them to cross the technological gap between atoll existence and living in New Zealand. For Vaine this consisted of learning how to cook meals over an open fire by using the right materials for the fire; how to clean shells for sale and remove the oyster, as well as how to utilise the limited range of products available on Manihiki for meals. At first, Metuakore cooked most of the meals until Vaine was able to take over.

Metuakore introduced Harry to diving for shell. He also taught him how to cross the lagoon by boat without hitting the coral heads,⁷ as well as the best fishing spots and the various methods.⁸

Vaine found it harder than Harry to adapt to life on Manihiki. She had no family on the island to help ease adjustment. Metuakore, being a man, was also unable to teach her some of the things she needed to know, and until she made some friends life was somewhat difficult for her.⁹

Coping with the diet was a problem, but being committed to staying meant that they had to adapt to eating 'local' food. It did,

⁶ There are dialectical differences between islands in the Cook Islands. However, Rarotongan is the dialect taught in schools and is becoming increasingly predominant.

⁷ This is especially important for crossing at night or late in the afternoon when the sun is low and glare off the water hides the coral heads.

⁸ The various methods of fishing entail use of equipment such as: nets, rods, spears trolling lines and long lines. There are also size and shape variations of each piece of equipment to be mastered, as well as knowledge of tides, seasons, lunar periods and fish species.

⁹ Vaine commented that "these things" varied from practical matters such as weaving, to matters of a more personal nature.

however, raise their appreciation of vegetables sent on the boat from their family in Rarotonga.

Both the children also found it hard at first, as neither could speak Maori. They have learned quickly, however, and are beginning to gain confidence in their ability to converse in Maori. At the end of 1989, the eldest child will be sent back to Auckland to Harry's sister to attend secondary school.

Gary, Harry's brother, returned to Auckland after two months on Manihiki. Unlike Harry he could not speak the language and could not put up with the isolation of Manihiki.

Harry and Vaine's first plan was to come to Manihiki for a year to see how it went. If farming worked out for them, they would build a house on Rarotonga as their base and live in a *fare pora* on Manihiki. Eighteen months later, both are now committed to building a permanent house on Manihiki. Despite all the political problems, Harry said "I believe it is going to be a big industry. Pearl farming is the only industry for here, not copra."

Harry and Vaine have joined Metuakore in working on his farm. They have no plans to begin farming by themselves and feel their share is now in the "family farm" that Metuakore began.

While on Manihiki, Harry and Vaine have been dependent on Metuakore for their income. This may change as Harry becomes more proficient at free-diving and as the farm develops. Their savings are tied up in New Zealand, and they will not have access to the funds for another two years.

Both Harry and Vaine belong to the C.I.C.C., although their attendance is irregular. Sunday is observed as a rest-day, and they always put down an *umu* on Saturday night.

Case Study Five

Arthur is 33 years old and was born on Rarotonga. His mother is a Manihikian and his father was a *papaa*. Raised on Rarotonga, Arthur attended primary school there before going on to secondary school in Auckland. After leaving school he kept up his education through correspondence courses at the University of the South Pacific (U.S.P.) Extension Centre on Rarotonga.

While he was completing his courses Arthur was also spending time in the outer islands acquainting himself with his family members. To this end, he first went to Manihiki in 1981 for six months. It was at this time that he was introduced to the idea of pearl farming by Peter Cummings and Tekake Williams.

Leaving Manihiki with an attraction to farming established, Arthur enrolled for a full-time course at U.S.P. in Suva. He graduated with a Bachelor of Arts in 1984 and joined a government department on Rarotonga. From there he was able to keep in contact with the gradual development of the industry.

In 1988, following the first seeding, Arthur took a year's leave of absence and returned to Manihiki to set up a pearl farm. His wife, also a graduate of U.S.P., is employed in another government department on Rarotonga. She remained behind with their two children.

Arthur is living with his cousin's family in their house. His kin on Manihiki have given him a piece of land outside of the village where he can build a house. His intention, however, is to build a *fare pora* on the site, which he was still clearing during my fieldwork.

Arthur's initial plan was to live on his savings for the two to three years it would take the farm to become economic. A third child resulted in a rapid depletion of his savings, however, which necessitated Arthur taking a job. He is currently teaching at the local primary school.

Fluent in both Maori and English, Arthur stated that he had experienced little trouble in re-adjusting to the diet and life-style. From his previous trip in 1981 he knew what to expect and came prepared. As regional and local politics used to be one of his interests, he did, however, miss "basically finding out what's going on in the world, current events."

Arthur's adjustment was made easier for him by being able to join an already existing household on Manihiki. He eats all his meals with his cousin's family, and his cousin's wife does all their cooking. The family is comparatively better off than others. They possess a gas stove and a kerosene burner and utilise both, as well as cooking over an open fire. They also own a video and several boats. Arthur lives next to the public water catchment, so he has easy access to water.

In return for staying with his cousin, Arthur contributes out of his salary towards food costs. His cousin has also had the use of SCUBA gear that Arthur brought with him from Rarotonga, as well as other farm equipment such as ropes and floats.

Arthur has set up his own farm, which he usually works by himself. When he needs them, however, he can call on his cousins for assistance. Prior to returning to Manihiki, Arthur had researched thoroughly all aspects of farming. Accordingly, he came prepared not just with farming materials, but also with a video and a spare outboard motor. These he exchanged for the equivalent monetary value of live shells.¹⁰

The rapid acquisition of shells for seeding was in an effort to be ready for a seeding during April 1988. The political problems on Manihiki prevented this, however, and almost led to Arthur giving up and returning to Rarotonga. "The opportunity cost for me to come to Manihiki was very high," he said. He gave up a career in government plus

¹⁰ For the equivalent money value of the video, i.e., \$1800, Arthur obtained 600 shells which are valued at \$3 each

future prospects of work around the Pacific for regional organisations.¹¹ Any future economic gains from farming, then, will need to be sufficient to replace in monetary terms what he has lost. When this prospect was in doubt during 1988, Arthur considered cutting his losses and rejoining his department. However, the election of a new Island Council and an increase in the influence of local farmers encouraged him to persevere.

Arthur eventually hopes to farm pearls on a large scale of around 10,000 shells by using contract labour. At present, he is concentrating on building up his shell numbers and developing his spat collection methods. He teaches until 3 p.m. and then works till dark on his farm. Saturdays are also devoted to the farm. While Arthur adheres to no religion, he does observe the Sabbath as a day of rest.

The future for Arthur's family remains uncertain. He does not want to move them from Rarotonga until certain aspects of life on Manihiki improve, such as the infrequency of transport to Rarotonga, the poor communication facilities, and the standard of education available. Until then, his wife and children will stay on Rarotonga.

Motivations

For each of the seven migrants the decision to move to Manihiki was prompted by the potential economic gain represented by pearl farming. While some may have returned regardless, the duration of their stay would have been short. The economic attractiveness of Manihiki is relative to the current worsening of the employment situation in New Zealand. Over 65% of island-born Cook Islanders were employed in the manufacturing, building and construction industries in 1986 (Bedford and Didham, 1989, p-23). This area has been severely hit by high

¹¹ At the time of taking leave of absence, Arthur had an offer of a scholarship to Japan plus work for S.P.C. or S.P.E.C.

redundancies during the mid 1980s. It is significant that five of the six migrants from New Zealand had recently been made redundant from their jobs. Had redundancy not occurred, they would not have been as disposed towards returning. Large redundancy payments also afforded the opportunity of a substantial capital input to begin farming. Three out of the five did so, but the other two, of which Harry is one, invested the money in New Zealand. They did not need the capital, as they joined existing farms on Manihiki.

The decision to move to Manihiki was not made suddenly, but appears to have been contingent upon several factors. Besides redundancy, there was also the actual potential of the pearl industry, not the suggested potential. Five of the seven migrants made exploratory trips or set trial periods before committing themselves to farming. For Harry and Arthur, the trial period was a year. For others it consisted of going to Manihiki by themselves for two to three months before returning to New Zealand to collect their families.

As well as the economic situation, there is also the role of the kinship unit in encouraging migration. Three of the six migrants from New Zealand received invitations from kin on Manihiki to join them in developing a farm. In Harry's case it is doubtful that he would have chosen to return to Manihiki without this invitation. Even the five migrants who did not join an existing farm but chose to begin their own were still dependent initially upon kin to assist in re-integrating into Manihiki society. The most obvious example is assistance in crossing the technological gap: between life in New Zealand, or Rarotonga, and life on Manihiki.

Characteristics

All except one of the migrants were between 30 and 40 years of age. Thus, they were all able to carry out the labour intensive jobs

required to farm and live on Manihiki. Also, all had been raised in the Cook Islands for some part of their early childhood and were fluent in Maori and English. Each migrant also joined an existing kinship unit, and, by the end of the fieldwork, only three had built their own house away from their initial place of residence.

Mention should be made of individuals who did not consider the move worthwhile. One such example is Chris, a Penrhyn Islander married to a Manihikian who is in his final year of N.Z.C.E. He visited Manihiki for two months but concluded that, following his qualification as an engineer, farming would not be a profitable use of his talents. Chris also cited the isolation and bad external communication systems as other factors in his decision.

Chris' decision might suggest that better educated/highly qualified Manihikians living in New Zealand or Rarotonga would not be attracted to Manihiki. This, however, is not the case. Arthur is a university graduate, as is the author. What may prove to be a qualification-linked characteristic is expressed in the attitudes towards farming. Arthur wishes to develop farming on a large scale, individually owned, with the possibility of employing labour. Contrastingly, Harry will stay involved with a family farm and work on developing that to the best of his ability, with other members of his kin group.

Upon return, a migrant must strike a balance between the economic demands and the social demands of life on Manihiki. As part of a small village which is dependent on a communal effort to accomplish certain tasks, e.g., burials, boat days, preparing a *kai-kai*, one cannot always work for oneself. A higher educated/ highly qualified migrant may emphasize the economics of farming and earning an income, over the social aspects contingent to the move of learning traditional skills and customs, and participating in community affairs. On the other hand, a

lower status migrant may seek more of a balance and be prepared to accommodate other demands of his/her time.

What several of the migrants have done is to select and emphasize their Manihiki identity over others. This is in order to be allowed to farm in the lagoon, as permits are only granted to Manihikians. Arthur's father was European and his mother Manihiki/Palmerston. Harry's mother was Aitutakian and his father Manihikian. Harry's situation expresses the selective emphasis clearly, as he could have claimed Aitutaki descent and returned there but chose Manihiki despite never having been there.

Effects

What will be the effect on Manihiki of this new migration trend? New arrivals will bring with them new habits, attitudes, skills, and expectations developed from life in New Zealand or Rarotonga. It is still too early to ascertain if any lasting structural changes or innovative effects will occur, but smaller effects are discernible. The orientation towards *papaa* food for instance means that initially a large percentage of their diet is store bought, as shown by the change in Metuakore's diet (refer case study one). The persistence of this depends on the migrant's ability to learn the various skills and techniques required to obtain food, e.g., fishing, husking nuts.

What is also observable is that the skills of new migrants which can be utilised by Manihiki society are employed. For example, Arthur was offered a job teaching at the local primary school, Harry was elected to a position on the sports committee, and one other migrant was elected to the Island Council in April of this year. This utilisation of migrants' abilities lessens their impact by integrating them into the existing society. However, the continuation of this trend is uncertain, if the number of migrants increases rapidly.

CHAPTER SIX: CONCLUSION

Social Impact

Analysing the social impact of the development of the cultured-pearl industry on Manihiki has been the over-riding concern of this study. The data collection methods chosen to facilitate the analysis reflected the position of the researcher as a member of the community under study. The advantages and disadvantages of this have been described in chapter two.

In chapter three we discussed the relevance of various theories of development for studying the Pacific Islands and proposed a rudimentary theoretical framework. I suggested that it is necessary to combine an analysis of traditional value structures, with an historical account of the development of socio-economic relationships within and between Pacific Island countries and the rest of the world. The combination equips the researcher with the knowledge of a social setting needed to assess development in that area. With regard to this framework, what insights can be gained from the results discussed in chapters four and five?

By assessing the impact on some traditional values of Manihiki society, we can state that the impact of the industry has not been destructive. For instance, the family has been retained as the primary economic unit of production, with both sexes contributing to the labour requirements. The sexual division of labour caused by the monetisation of the shell during the last century and maintained by the diving practices, has continued into the farming practices. Men carry out the majority of the physical labour requirements and women are restricted to land-based tasks with an emphasis on food preparation.

The kinship structure remains an integral part of social organisation on Manihiki and has been adapted to meet the occupational

change caused by the development of farming. For example, the international extended family network as described by Loomis (in Watters, 1987) and Underhill (1989) has been utilised to provide materials and labour for developing farms on Manihiki

Individuals and families still participate in reciprocal labour exchange for large farming jobs such as laying of lines and drilling of shells. Subsistence skills (fishing, husking nuts, building a *fare pora*) are also being maintained, reproducing the combined modes of production that characterise Manihikian economic life.

As stated above what has occurred is an occupational change brought about by the introduction of new technology, in this case, the change from diving to farming, which is happening at differing rates according to individual circumstances, e.g. age, location. A restructuring of income is also associated with the rate of change to farming. Farmers face an eighteen month delay before receiving any returns. If they do not continue diving and have no other source of income, an increase in their debts will occur, as reliance on subsistence living is not total, e.g., Tangiia's *kaiou* .

The development of the industry may yet have a greater impact in the years to come. Currently, by farming on a small-scale, families still have time to carry out other functions. Specialisation remains incomplete. Social activities such as community work days can be carried out without preventing the completion of farming commitments. It is also too early to assess the economic impact that revenues from farming will have. While I have attempted this in an elementary fashion in the case studies, the more critical period will be when the 28 farmers who seeded in 1988 have their harvest in 1990.

Other areas where the development of the industry has introduced change is in the patterns of migration and remittance payments. The

viability of the lagoon for shell-diving led to an increased retention of people on Manihiki. Thus, as Underhill points out, short-term and circular migration were becoming more popular than permanent out-migration (Underhill, 1989, p-77). The advent of farming has continued this trend and developed it to attract overseas-based Manihikians back to their island.

At this stage, no significant effect of this migration is observable. The majority of migrants are bilingual and have kin to assist in integration. As Toren's study indicates, however, an economically motivated move may indicate a short-term stay (Toren, 1976). If the pearl industry experiences a downturn, how many would be prepared to stay? This may be affected by how quickly migrants are integrated into the society and can begin to identify with the other social benefits gained from living on Manihiki.

In chapter three I discussed the utility of the Mirab theory for studying Pacific Island development. My analysis of the migration pattern and the remittance flow in this study, indicate that theories of development cannot ignore the range of conditions within Pacific Island countries. Mirab theory, as it stands now, focuses on a movement of migrant labour out of the Cook Islands and a flow of remittances back, creating two linked communities. This study, however, indicates that migration and remittance payments flow in both directions between three communities: Manihiki, New Zealand and Rarotonga. Remittances are also of less importance on an island such as Manihiki than they would be to Rakahanga or Pukapuka, which, with the depressed copra market, lack a viable on-shore industry. The distinguishing factor in Manihiki's case is the lagoon and the income that it generates through the mother-of-pearl shell.

How the remittance of money from Manihiki reinforces and maintains kinship ties should be noted. Of more importance however, is the adjustment required to our perception of the dependence of kin in the islands on family members overseas. Islands like Manihiki can provide their inhabitants with sufficient income to make them no longer dependent on money from kin overseas, for their economic well-being. In some cases this may extend to the point of reversing the dependency.

Political Development

Where the development of the industry has had the greatest effect is in the political relationship between Manihiki and Rarotonga. The political conflict is not a recent phenomenon, but is built on a traditional perception by the Manihikian people of the indifferent approach to their lagoon rights by central government.

Political control of the industry continues to lie with the Island Council. As a result of this, and by utilising their isolation and lack of an efficient communication network with Rarotonga, Manihiki has been able to act independently with regard to some developments of the industry, e.g., the contract with Yves Tchen-Pan.

Political control of the lagoon, however, has not reduced the economic dependency of Manihiki on Rarotonga. On the contrary, it has been reinforced and may be further strengthened by the development of the cultured- pearl industry. The industry has not widened Manihiki's economic base significantly. Manihiki is still dependent on Rarotonga for access to manufactured goods and foodstuffs as well as links to the outside world. Manihiki's exports are still concentrated in specific markets and dependent on two raw materials: the coconut and the mother-of-pearl shell.

Increased contact with Rarotonga will probably occur as a result of the development of the industry. A higher standard of communication services will mean Manihiki is unable to remain as isolated from the bureaucracy centred on Rarotonga. Should this occur, then greater changes to the present lifestyle can be expected.

At the political level, if the proposed Fisheries Act is passed, allowing implementation of the management plan by the Ministry of Marine Resources, then the Pearl and Pearl-Shell Act will be repealed. The Island Council will still remain responsible for issuing permits but will lose some of their overall responsibility for guiding development along the lines they choose. It is because the Island Council has had this independence that the socio-economic impact has been lessened. They have made their decisions according to what they perceived would be beneficial for Manihiki and refused to sacrifice community life for economic development, as shown by clause 17 of their Farming Permit.

The view held by governments, development 'experts' and planners is that development is intrinsically good. However, the development model is based on Western ideas of what a developed society is. These ideas are used to characterise countries as traditional, modern or underdeveloped. Manihikians have videos, freezers, stereos and other chattels of the developed society. At the same time they maintain a partially subsistence life-style based on community involvement. Is Manihiki, therefore, a traditional or modern society? Manihiki is dependent on Rarotonga for communication links, manufactured goods, and as a market-place for its products. Does that make Manihiki underdeveloped?

Manihiki cannot be described under these labels due to the range of socio-economic conditions co-existing at present. To locate Manihiki within a development framework, requires another measure of

development that unites the economic (underdevelopment) and the social (modernisation) perspectives. This approach must also allow for the influence of geographical factors such as size and isolation, and for the different cultural traits that are exhibited by individual communities.

I have attempted to employ the new framework by utilising aspects of each perspective: value change from modernisation theory and an analysis of historical socio-economic relationships from underdevelopment theory. Allowance was also made for the particular physical environment of Manihiki and its influence on social life. While my analysis is elementary, it is hoped that it can be built on and developed by future research.

The introductory phase of cultured-pearl farming is over, with most families now having a small farm of between 500-1000 seeded oysters. As farms grow in size and number, increased demands of time and labour will exert pressures on other aspects of life on Manihiki. It remains to be seen whether or not this development can be channelled to benefit the people of Manihiki without destroying the distinctive socio-cultural nature of community life on this isolated atoll.

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